

PROGRESSIVE ARCHITECTURE July 1963

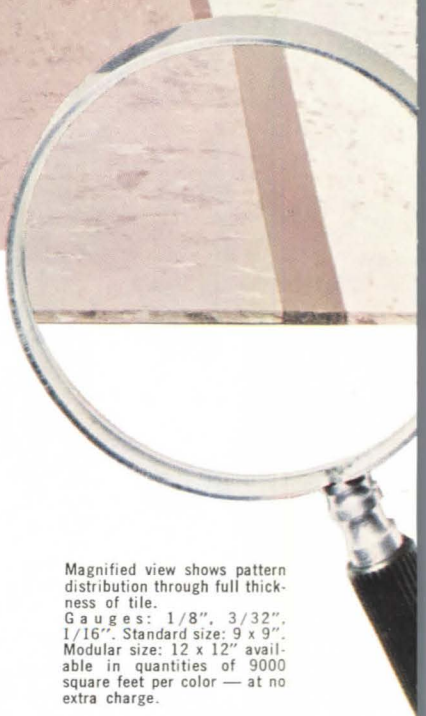


Colors: V-423 Autumn Haze, V-427 Romany Beige with red and brown feature strip

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elegant floor beauty that won't "walk off"...

. . . because the travertine patterning is distributed through the full thickness of the tile. Premiere Series in Vina-Lux vinyl asbestos tile is a unique combination of subtle styling and rugged resistance to maximum traffic loads . . . delivers so much more value and performance than surface patterns . . . yet costs no more. Specify Vina-Lux Premiere Series, for installation over concrete — above, on or below grade, or over wood or plywood subfloors. Consult Sweet's Catalog — or let us send you samples, color charts and detailed architectural specifications. Azrock Floor Products Division, Uvalde Rock Asphalt Company, 524A Frost Building, San Antonio, Texas.



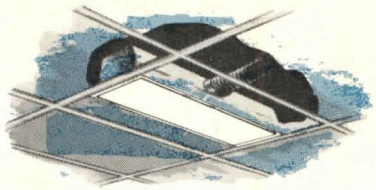
Magnified view shows pattern distribution through full thickness of tile.
Gauges: 1/8", 3/32", 1/16". Standard size: 9 x 9". Modular size: 12 x 12" available in quantities of 9000 square feet per color — at no extra charge.

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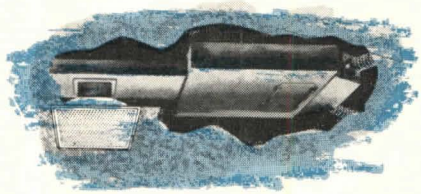
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Complete flexibility with △air and Ⓦlighting: To save space, to give maximum design freedom, to provide draftless air distribution and efficient lighting, over 4000 Anemostat® CLD diffusers are hidden from view on the sides of Westinghouse Airliner Mark II lighting troffers.



△HV all-air high velocity mechanical constant volume mixing boxes are the most advanced dual duct temperature and volume control units available today. **Factory balanced and calibrated.** No maintenance. △PD-1 perforated diffusers unobtrusively blend with ceiling design.

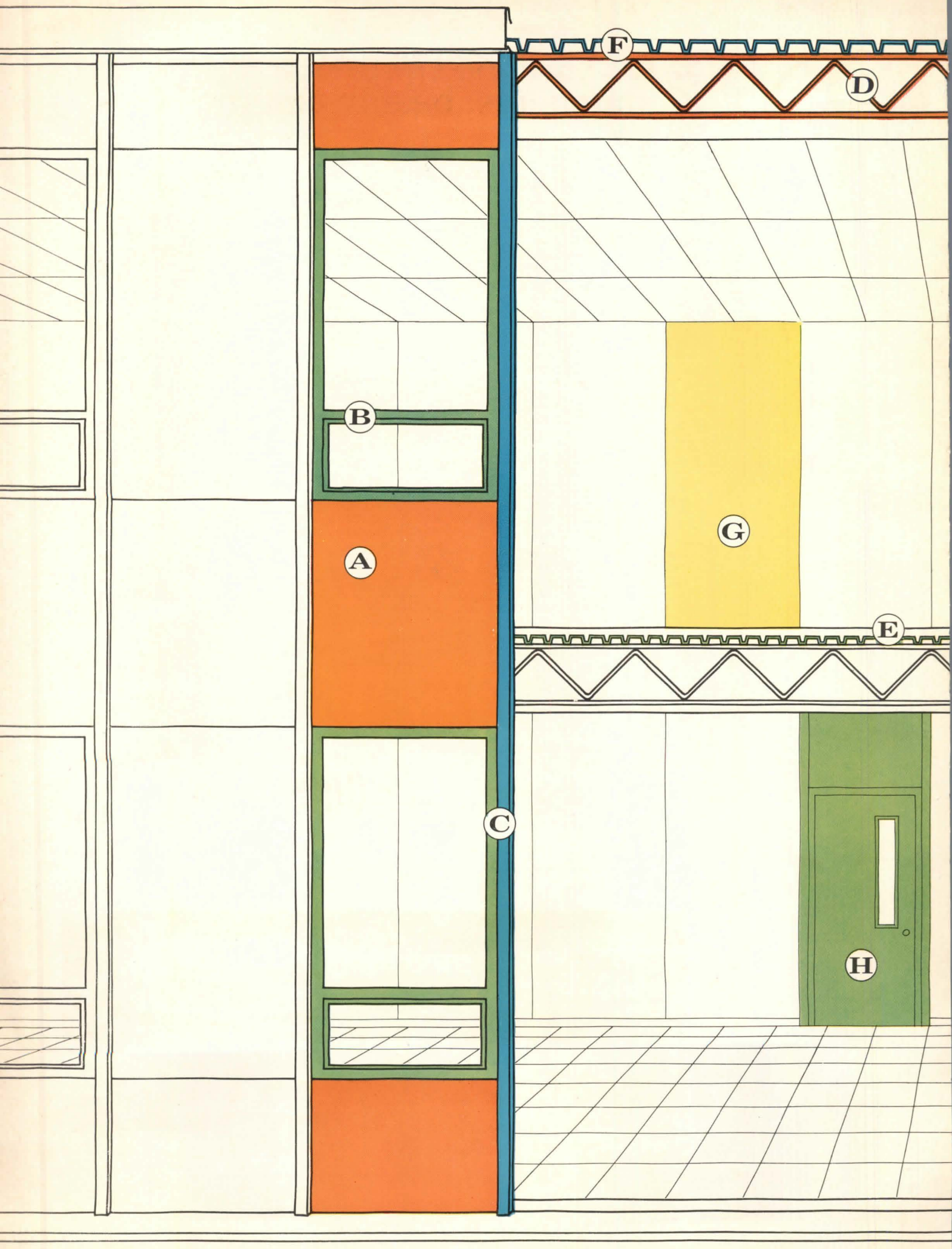


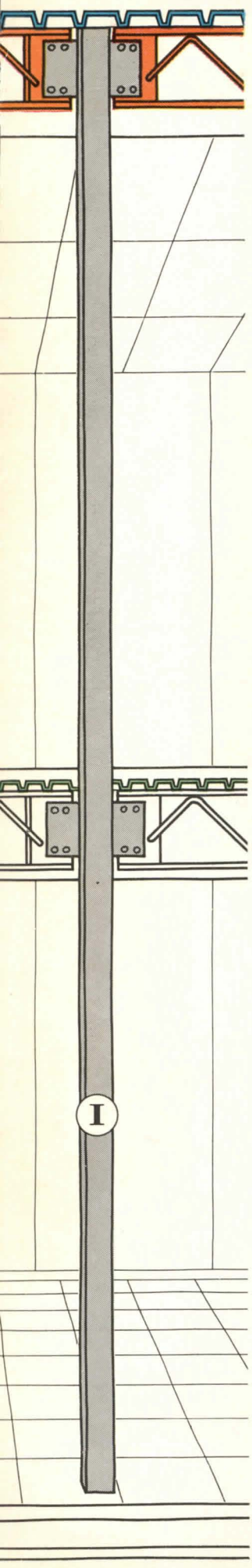
About one mile of stainless steel △Diffus-A-Curb provides peripheral air diffusion throughout, permits complete climate control for constantly changing loads. In this case, air to the Diffus-A-Curb is supplied by △HVE mechanical constant volume units.

Space limitations, design freedom and air distribution requirements of Pittsburgh's new IBM building call for adaptability and control which only all air dual duct high velocity equipment can provide. △To achieve complete climate control under all conditions, Anemostat high velocity equipment and diffusers were selected for this 700 ton job. Want new ideas for your building? Call in your Anemostat representative or write for new literature to:

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AmBridge Coordinated Building Components: beauty and the best

AmBridge Coordinated Building Components are precision-fabricated. The system is simple and fast to assemble—because every component fits perfectly. Biggest use so far for the AmBridge family of components is schools (where costs are often 13-18% less than average), but AmBridge Components have also been used successfully for power plant, bank, warehouse, laboratory, and office buildings. Architects find that AmBridge Components readily lend themselves to the most modern modular design practices.

USS AmBridge Curtainwall

(A) USS AmBridge Curtainwall systems are available with exterior faces in the 47 recommended PEI colors. Interior surfaces are fully finished with vinyl (at no extra cost to you) or baked enamel to match or harmonize with the partitions. The steel panels are normally designed to a 4-ft. module and run continuously outside the columns. Standard panels are available in 1-, 2-, and 3-story heights. Panel frame members are cold formed galvanized steel. Face sheets are mechanically attached to the structural frame. Heat transfer is controlled with thermal breaks which prevent a thru-metal condition. Because the glass fiber insulation is held away from the exterior face by stainless steel clips, the panel is free to breathe, thereby minimizing condensation. AmBridge walls are so thin compared to masonry construction that you gain about 5% usable floor space. Yet the walls provide a tested thermal "U" factor of .168 that assures comfortable temperatures at reasonable cost.

(B) Sash are high-quality 2" monumental projected or fixed-type, of stainless steel or aluminum. Vertical or horizontal sliding sash are optional.

(C) USS AmBridge Exterior Battens are extruded metal sections with provisions for mechanical attachment without drilling from interior. Battens are fitted with shop-applied neoprene gaskets that permit expansion or contraction while keeping joints weathertight. Custom-designed covers permit aesthetic variation in stainless steel, porcelain enamel finish, or special extruded shapes.

USS AmBridge Open Web Steel Joists

(D) USS AmBridge Open Web Steel Joists support floors and roof. Joist and framing details have been designed to adapt to any specific load requirements. Like all AmBridge Coordinated Structural Components, joists meet specifications of the SJI, AWS, AISC, and AISI latest adoptions.

(E) Leave-in-place light-gage steel floor forms provide support during cure for the poured concrete floor.

(F) Steel roof deck specifically engineered to the structural requirements permits all-weather installation, receives insulation for built-up roofing and supports roof loads.

USS AmBridge Partitions

(G) USS AmBridge Partitions, like our curtainwall interiors, are available in six pastel vinyl finishes that cost no more than our 28 baked enamel colors. Both finishes are applied under factory-controlled conditions. Mild detergents easily keep surfaces clean and new-looking. The panels incorporate a cold-rolled steel channel frame with face sheets attached to each side. Partitions are insulated with glass fiber, and although only 2¼" thick, they provide excellent acoustical values. Test results show an attenuation of 45 decibels or more from room to room. Partitions are easily movable (just unbolt) to permit alteration of room size with minimum disturbance and cost. Interior battens are flush with the partition and are removable for simplified wiring.

(H) USS AmBridge Steel doors with a corrosion-resistant polyurethane foam core are supplied as an integral part of exterior and interior panels. All doors are complete with pressed steel frames and hardware, baked enamel finish, and can be furnished with lights and/or louvers. Neoprene weatherstripping is furnished on all exterior doors to assure a storm-tight seal. Hardware of the finest quality approved by the architect—such as lock sets, closers, panic bars and kick plates in various finishes—can be installed under supervision of experienced AmBridge personnel.

(I) Square or rectangular tubular columns are offered for maximum economy of section.

If you want, American Bridge will provide experienced erection crews. We'd like to give you more information. For our free full-color booklet, write to American Bridge Division, United States Steel, Room 1831P, 525 William Penn Place, Pittsburgh 30, Pa. USS and AmBridge are registered trademarks.

American Bridge Division of United States Steel

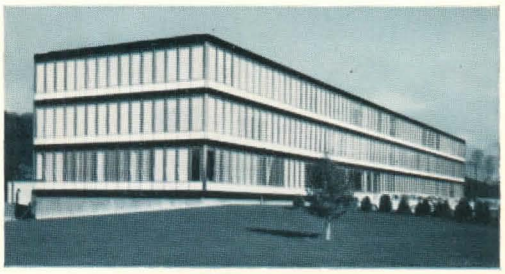
Beauty, too. Best of all, USS AmBridge Coordinated Building Components blend handsomely with traditional materials, letting you stamp your own signature on every AmBridge Building you design. Three good examples:



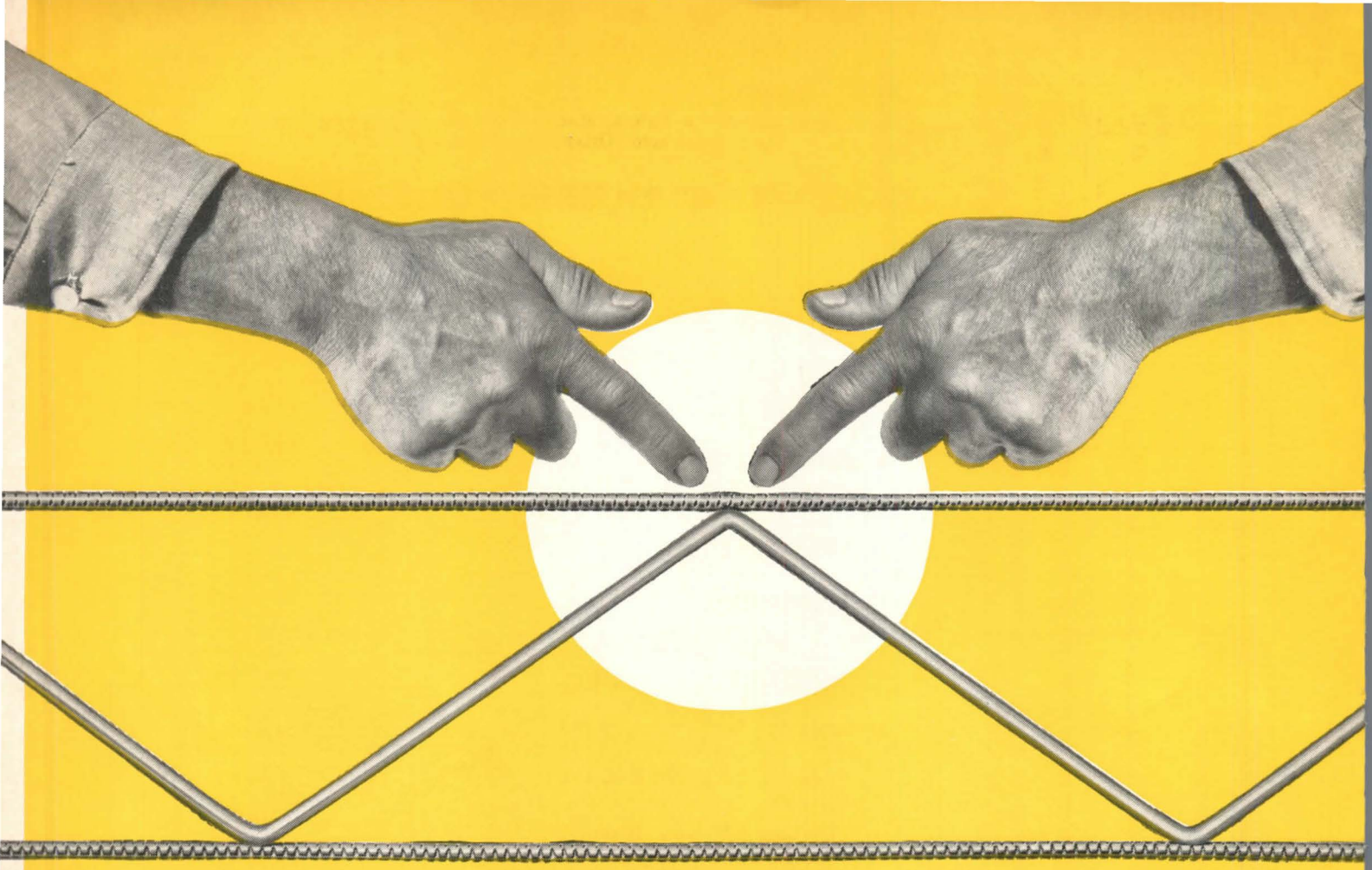
Broadway Elementary & Junior High School, Elmira, N.Y. Architect: Considine & Haskell, AIA, Elmira.



Mobay Chemical Company Office Building, Pittsburgh, Pa. Architect: J. Kenneth Myers, AIA, Pittsburgh.



Union Carbide Company Laboratory and Testing Building, Eastview, N.Y. Architect: Skidmore, Owings and Merrill, AIA, New York.



This is Dur-o-wal

the masonry wall reinforcement with the trussed design

Don't be misled by the common habit of calling all metal-rod reinforcement "durowal". Look for this trussed design. It distinguishes the real Dur-o-wal, insures maximum flexural strength, with all steel members effectively in tension and working together.

Impartial tests of 8″ concrete block walls proved that truss-designed Dur-o-wal exceeds accepted standards—increases the horizontal flexural strength from 60 to 135 per cent, depending on the weight and spacing of Dur-o-wal used, and type of mortar.

An independent new research study shows that Dur-o-wal tied walls outfunction brick-header tied walls. Write to any Dur-o-wal address below for 44-page test report.



STRENGTH WITH FLEXIBILITY—this basic masonry wall requirement is met for sure (and economically!) when Dur-o-wal, above, is used with the ready-made, self-flexing Rapid Control Joint, below.



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THIS MONTH IN P/A

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Cover DETAIL OF TOWER, Marina City, Chicago, Illinois: Bertrand Goldberg, Architect. Photo: Orlando K. Cabanban

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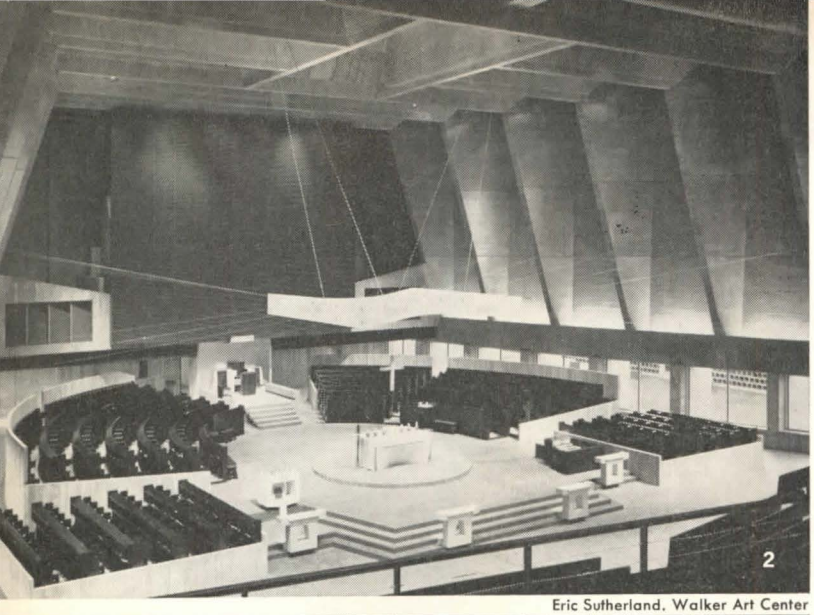
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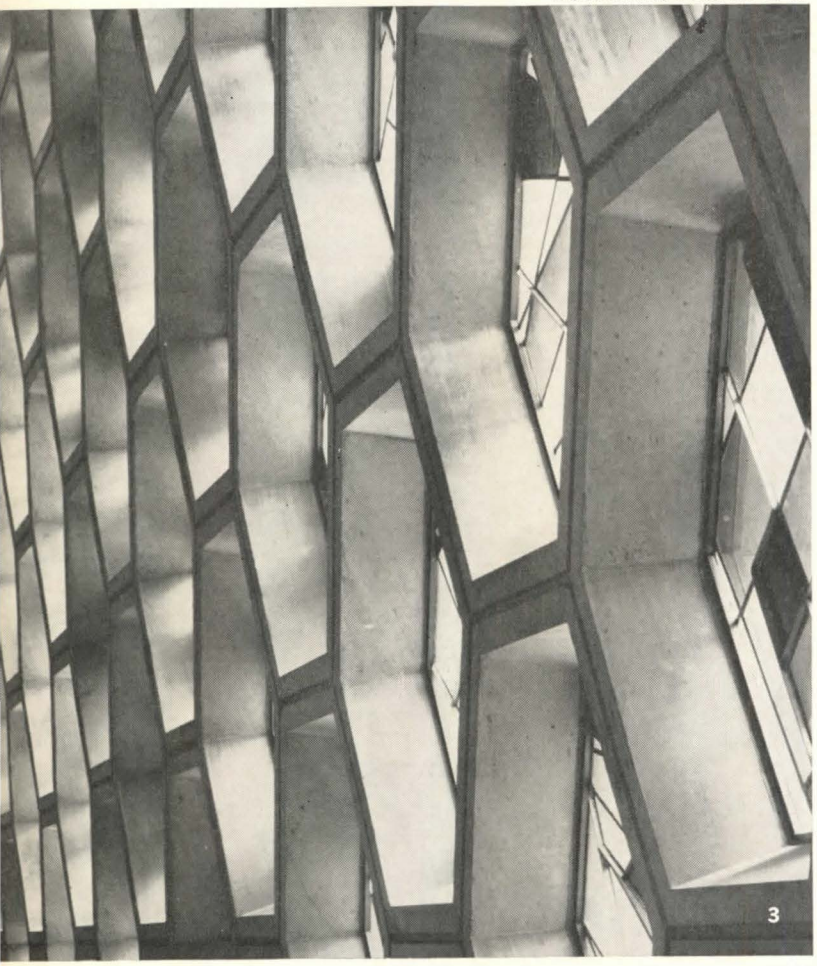
Lee Hanley, St. John's Abbey

New dimensions in POZZOLITH concrete at St. John's Abbey

St. John's Abbey, St. John's University, Collegeville, Minnesota. Design: Marcel Breuer. Project Architect: Hamilton Smith. Structural Engineers: Weisenfeld, Hayward and Leon. Structural Consultant on Theory: Pier Luigi Nervi. Coordinators for Owners: Traynor and Hermanson, Architects. Project Coordinator: Val Michelson. Contractor: McGough Construction Co. Construction Superintendent: Ted Hoffmeyer. POZZOLITH Concrete: St. Cloud Ready-Mix Concrete Co.



Eric Sutherland, Walker Art Center



1 strength and durability

The reinforced concrete bell banner is a huge plane, only 2½ feet thick at its base, that cantilevers upward 112 feet from supporting parabolic cross vaults.

POZZOLITH provided greater compressive strength, greater bond-to-steel strength, more durable finish, while it reduced drying shrinkage and prevented cold joints during placing operations.

2 surface texture

Sidewalls and roof of the Abbey church are a series of reinforced concrete folds, untreated and unadorned. The folds enclose a volume of more than a million cubic feet. Maximum interior clear height is over 65 feet, overall width is 165 feet.

POZZOLITH contributed to the workability and cohesiveness of the mix to help create the distinctive architectural finish which is a faithful reproduction of the sharp corners and surface characteristics of the wood form boards.

3 plasticity and placeability

The north facade of the Abbey church is a self-supporting geometric tracery consisting of 540 cast-in-place concrete hexagons.

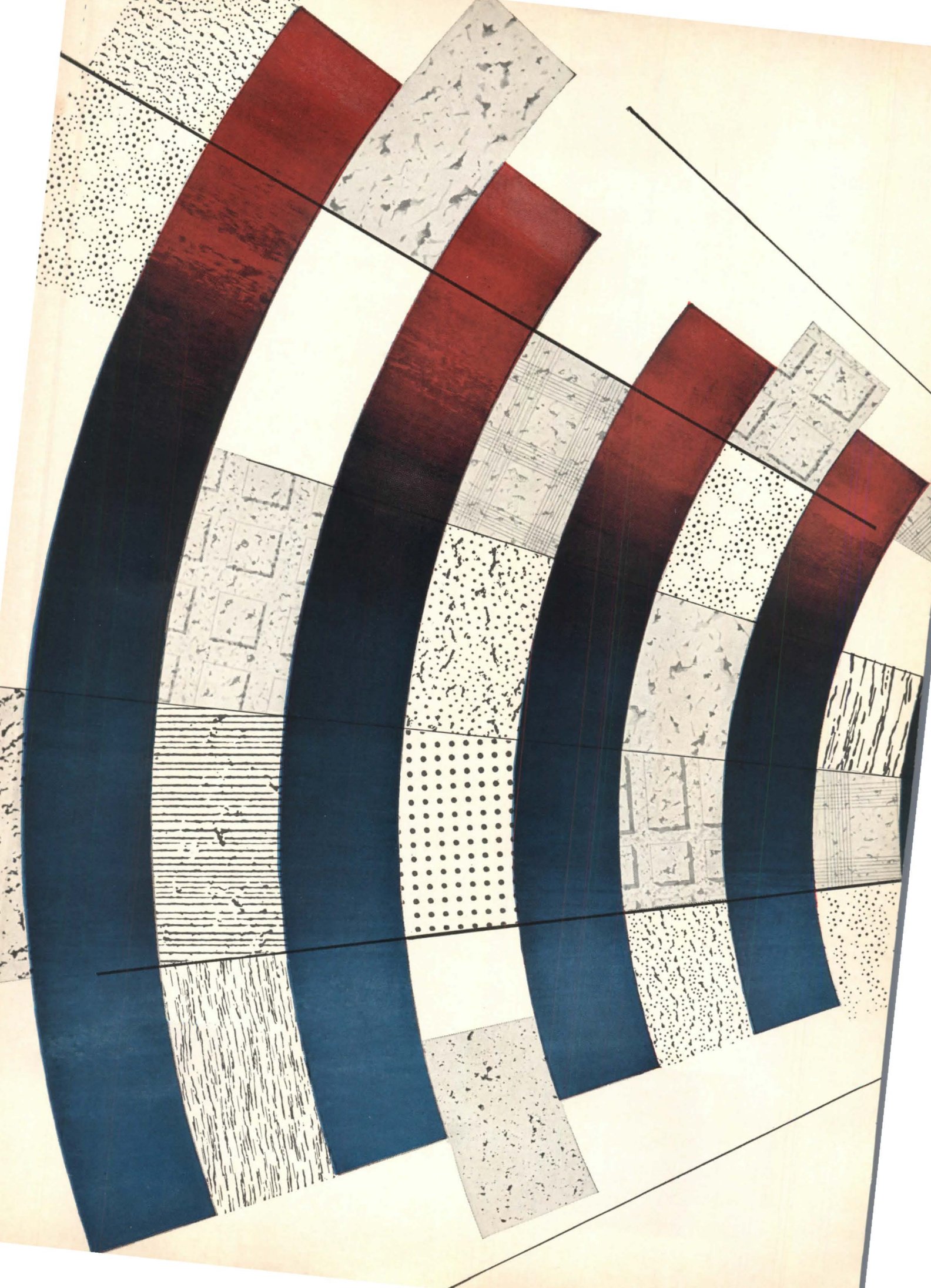
POZZOLITH increased plasticity and workability with a minimum of water in the mix, and produced a weather-resistant surface.

For complete details on *all* the beneficial qualities of POZZOLITH in architectural concrete, please call your local Master Builders office. *THE MASTER BUILDERS COMPANY, CLEVELAND 18, OHIO. A CONSTRUCTION MATERIALS DIVISION OF* ***MARTIN MARIETTA***

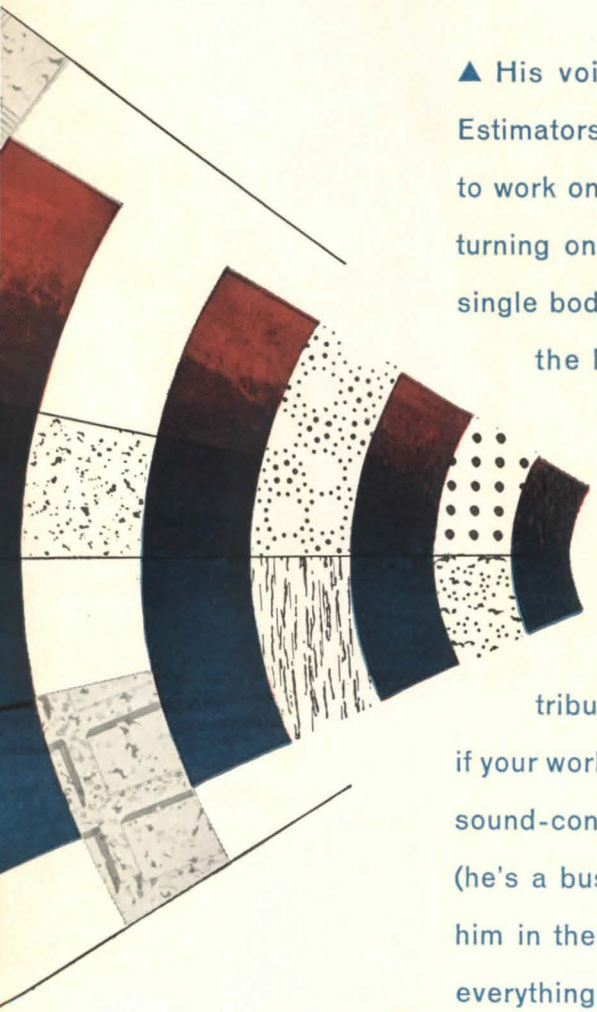
MASTER BUILDERS®
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*POZZOLITH *is the registered trademark for The Master Builders Co. ingredient for concrete which provides maximum water reduction, controls rate of hardening and increases durability.*

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Is the man with the answers in esthetic sound-control getting through to you?



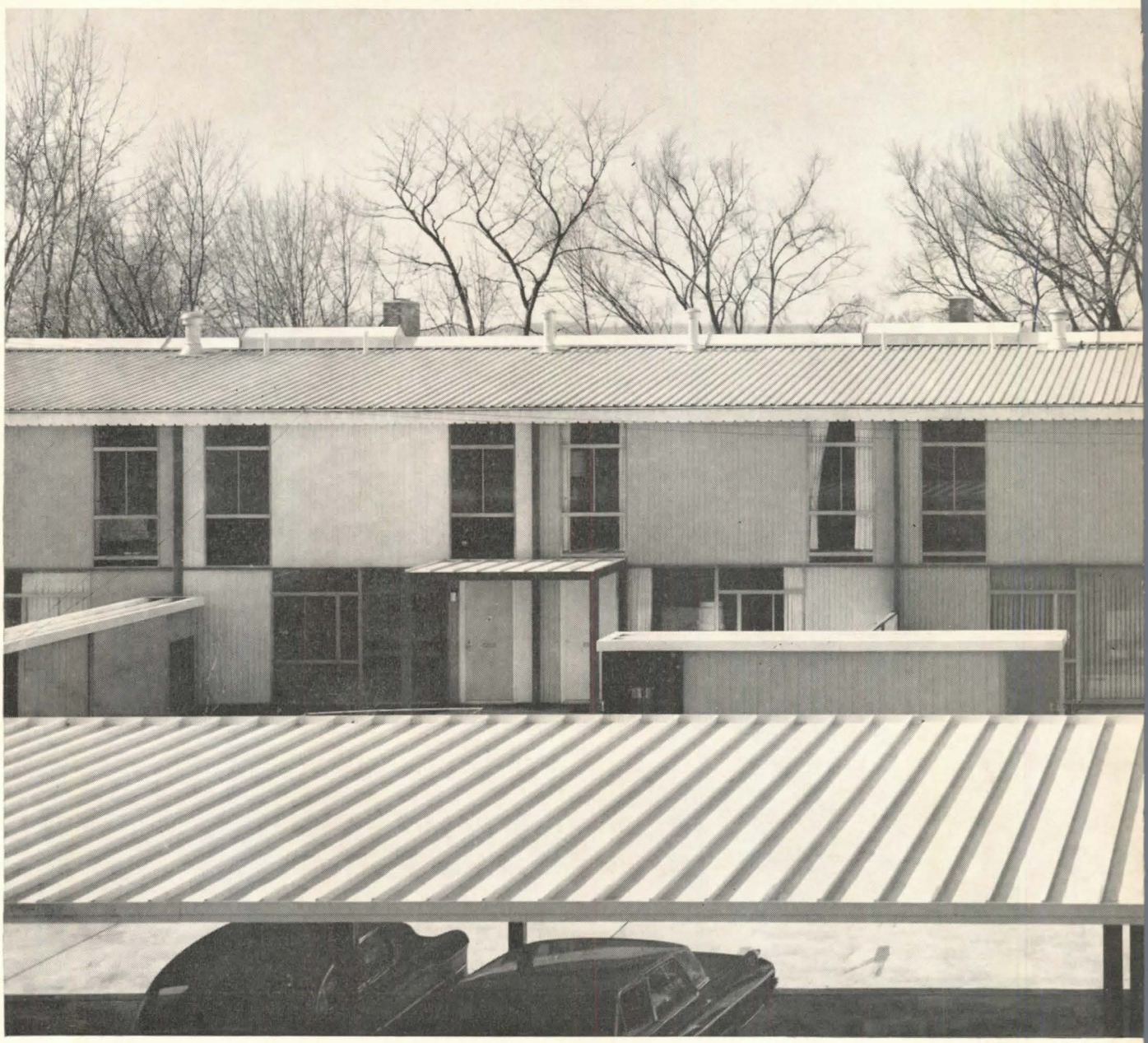
▲ His voice is respected because he commands an army. Estimators, designers, engineers, installers and inspectors go to work on your problem when he gives the word. As easily as turning on a faucet, he can put you in touch with the biggest single body of sound-control experience in the world. He offers the largest and most *varied* line of ceiling materials, acoustically *and* esthetically correct for today's demands, tested and proved in use. No one else can offer you even comparable variety and service. This man is at your beck and call. ▲ He's your local Acousti-Celotex distributor—a good man to know generally, and especially if your work leads you into the knotty-problem areas of esthetic sound-control. If he hasn't been getting through to you lately (he's a busy man) turn the tables and get through to *him.* Find him in the Yellow Pages and give him a phone call. You have everything to gain in dialing the man with the answers.

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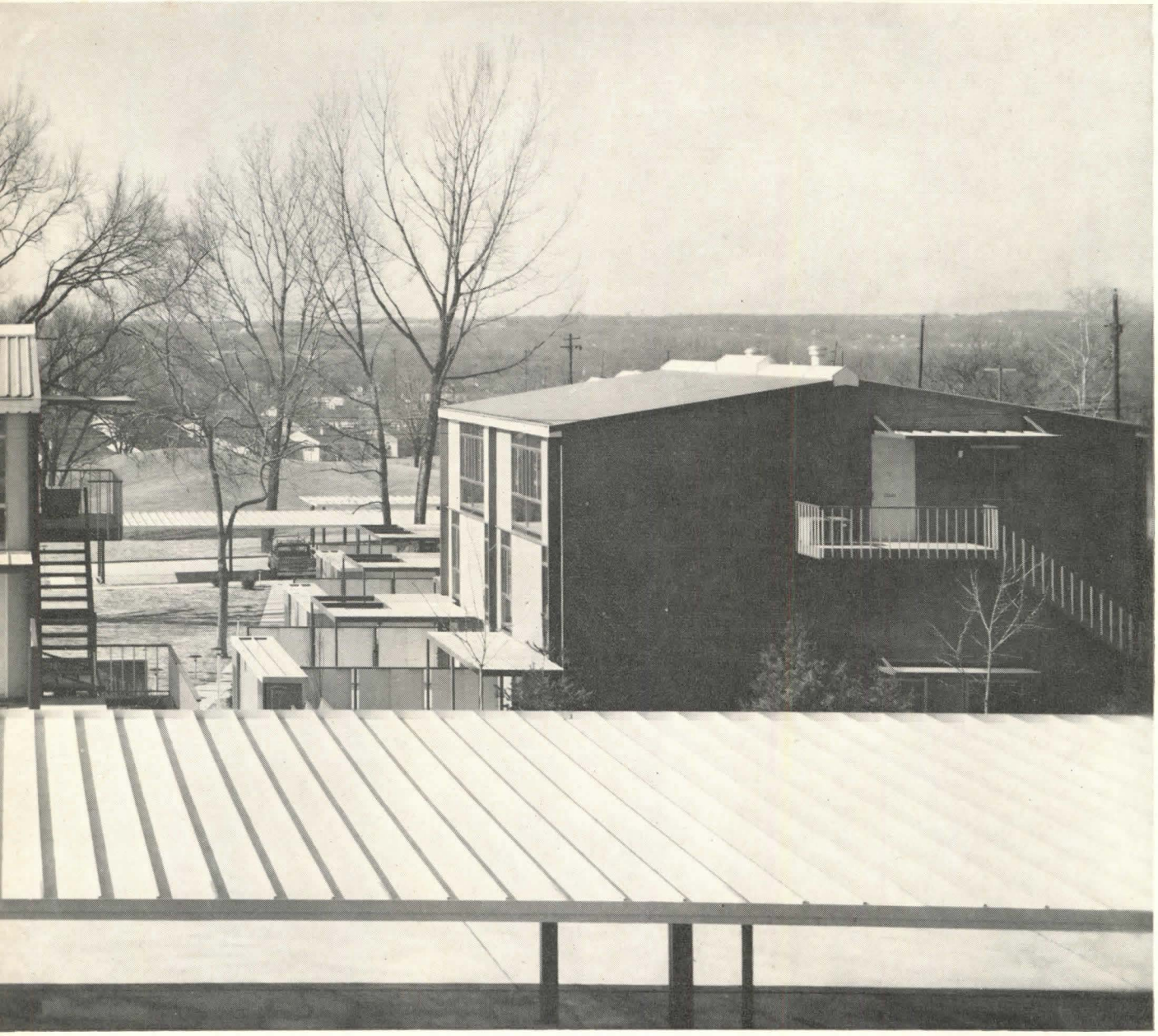
All structures in this new garden apartment complex are roofed with Armco ALUMINIZED STEEL Type 2.

Armco ALUMINIZED STEEL offers

Tight budgets are a real limitation in designing many residential and industrial structures. But Armco ALUMINIZED STEEL Type 2, hot-dip coated with commercially pure aluminum, gives you more design freedom. The reason is this special architectural metal combines the low cost of steel with proved durability for applications such as siding, roofing, panels, roof decking.

For 24 years, test panels of this coated steel have been exposed to the elements in an industrial atmosphere. Today, the base metal is still thoroughly protected by the coating. No rust has appeared.

To verify the durability of Armco ALUMINIZED STEEL Type 2 in actual service, a research survey was conducted last year. In 7 industrial areas, 55 structures were carefully checked. Evaluating the inspection, it was determined that the unpainted aluminum coating on Armco ALUMINIZED STEEL Type 2 *outlasts the coating on unpainted*



proved durability at LOW COST

commercial galvanized sheets by at least 4 to 1!

For a copy of this serviceability report and factual data on this low-cost metallic-coated steel, write us. It helps you evaluate the advantages. **Armco Division, Armco Steel Corporation, Dept. A-1573, P. O. Box 600, Middletown, Ohio.**

ARMCO **Armco Division**

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Wouldn't you prefer lightweight, non-corrosive EXTRUDED ALUMINUM DIFFUSERS that cost no more?

Waterloo offers EXTRUDED ALUMINUM DIFFUSERS for 1, 2, 3 or 4-way air diffusion, with your choice of **5 FRAME STYLES AND 14 CORE PATTERNS.**

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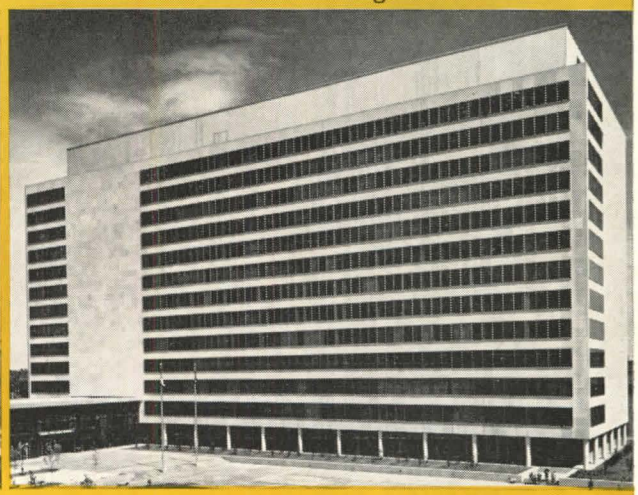
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■ In the construction of this new Indiana State Office Building, a monolithic reinforced concrete frame helped maintain minimum costs. Other construction materials had been considered, but by actual cost comparison—based upon building height and width—monolithic reinforced concrete frame and one-way joist floors proved to be the most economical.

For most types of buildings, monolithic reinforced concrete is the cost-saving structural method. Before YOU design or build, be sure to investigate all the advantages of this superior method including cost, design flexibility, and overall construction time. Write for the new booklet entitled "The Economic Advantages of Reinforced Concrete Building Construction."





Indiana State Office Building, Indianapolis, Indiana
Architect and Engineer: Graham, Anderson, Probst & White, Chicago, Illinois; and Raymond S. Kastendieck, Gary, Indiana
General Contractors: Virginia Engineering Company, Inc., Newport News, Virginia

monolithic reinforced concrete holds the line on construction costs

CONCRETE REINFORCING STEEL INSTITUTE

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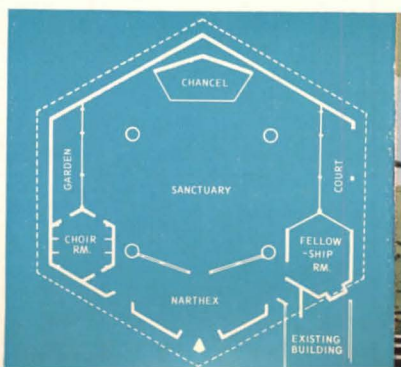
228 North La LaSalle Street • Chicago 1, Illinois

A Hilltop Sanctuary by Paul Thiry...

Starlux plate glass by ASG

I set out to create a "tent" to offer shelter for worship, yet keep the congregation close to nature . . . I wanted to make the land, the sky, the distant waterways one with the sanctuary.—Paul Thiry, F.A.I.A.

The Mercer Island, Washington, Presbyterian Church is Architect Thiry's expression of this concept in glass, concrete and steel. The tent-like concrete roof, designed to suggest cupped hands uplifted, provides the basic "shelter for worship." To create the intimate relationship between the congregation and the church's panoramic hilltop site, soaring walls of





ARCHED WINDOWS are created by ceiling configuration. Large openings up to 20 feet high were glazed with Starlux 3/8" heavy plate, smaller openings with 1/4" regular plate. Interior columns support entire weight of roof.

ASG's Starlux clear plate glass ring the building's hexagonal circumference.

These extensive walls of high-quality plate glass flood the church with natural light by day. By night, they make it a glowing beacon, visible for miles around. In addition, the superb clarity and high visual fidelity of Starlux keep worshipers in constant and accurate contact with the church's natural surroundings.

Starlux polished plate is the queen of building glasses—utterly transparent, brilliantly clear, with the total lack of distortion characteristic only of the finest plate glass. It's manufactured in the newest and most modern plate glass plant in America by ASG . . . the only U. S. producer of all three major types of flat glass: plate, sheet and patterned.

For further information about ASG's full line of flat glass products, write: Dept. E-7, American Saint Gobain Corp., Box 929, Kingsport, Tenn.

AMERICAN
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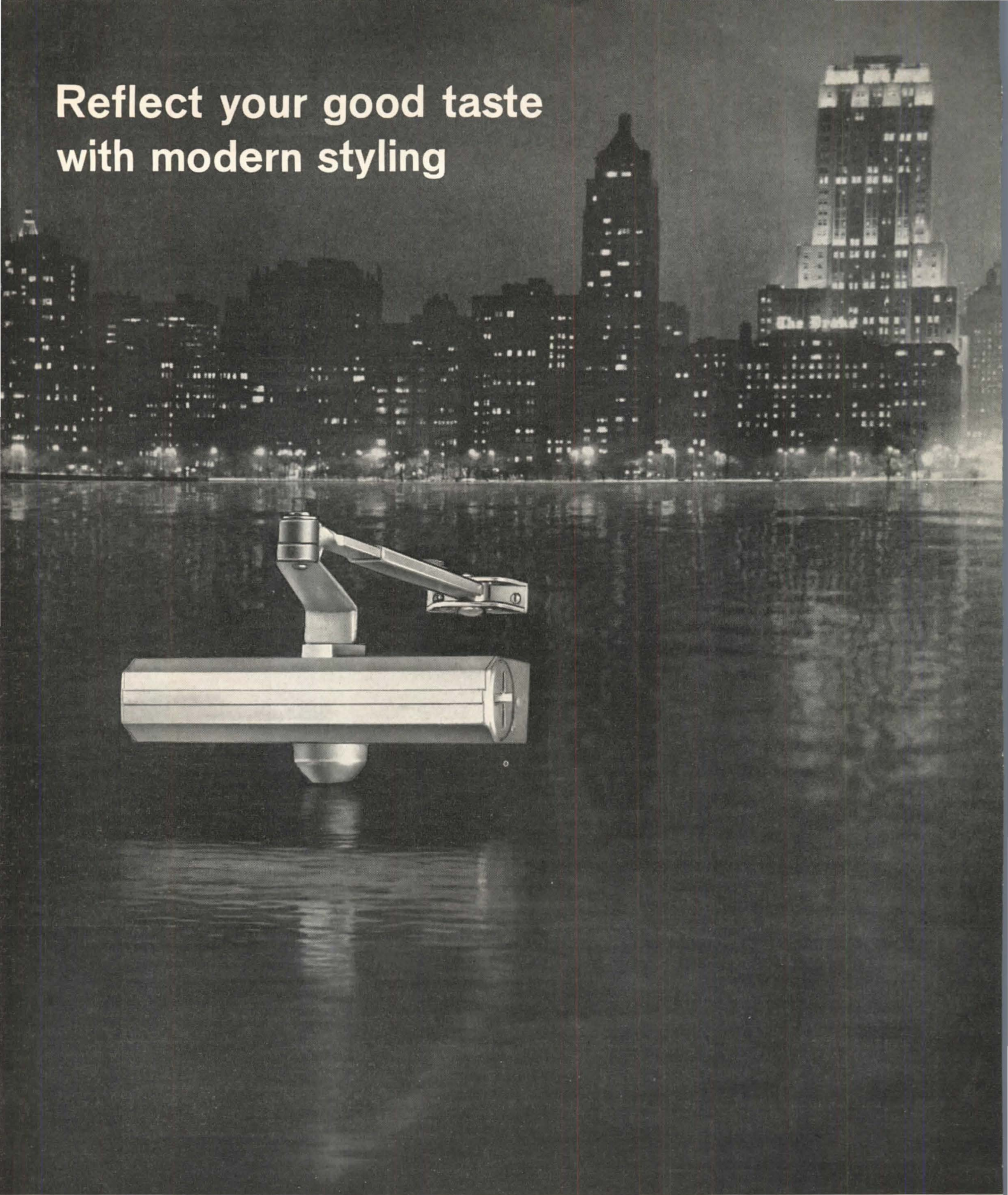


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Reflect your good taste with modern styling



Norton Series 1600 offers the ultimate in clean, modern styling. Designed specifically to compliment the clear crisp lines of modern architecture. You also have a choice of three distinct mountings: standard mounting, back mounting and invisible mounting.

Norton Tri-Style closers are non-handed in both hold-open and non-hold-open arms. Soffit plate included in package allows regular or parallel arm application. The exclusive adjusta-power shoe permits a 15% on-the-spot power adjustment without removing closer, arm or shoe.

On your next project specify the modern styling, versatility and dependability offered by the Norton Series 1600 Tri-Style closer. And choose the mounting style best suited to your requirements. For complete details write for Manual "T5".

1052

NORTON® DOOR CLOSERS 372 Meyer Road, Bensenville, Ill.

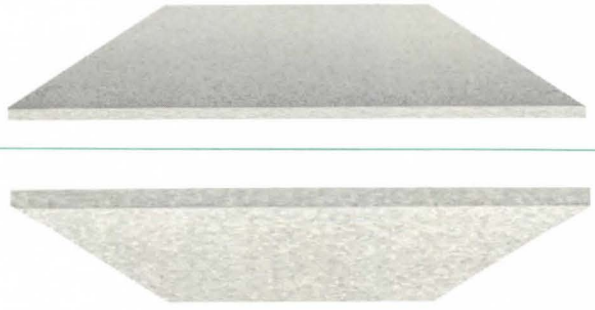
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Architects' Guide to

ENGINEERED PANELS OF WOOD FIBERS AND PARTICLES

their differences, uses, specifications, relative costs

The rapid growth in popularity of various types of mat formed panels has been accompanied by many changes and improvements in these products. This has made it difficult for those specifying and using them to keep up-to-date with latest developments. To answer this need for current product information, this guide provides an outline of the basic characteristics and major uses of the two main types of mat formed panels manufactured by Weyerhaeuser Company:



HARDBOARDS

PARTICLEBOARDS

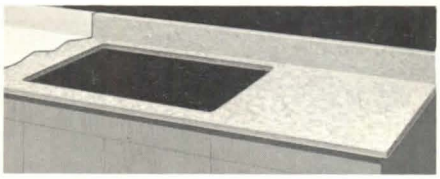
Weyerhaeuser Company
Wood Products Division

A.I.A. FILE NOS. 19-F-1, 19-D-2, 23-L

Weyerhaeuser
PARTICLEBOARDS

Two distinct types of panels serve different needs

Weyerhaeuser Company offers two types of particleboards; Timblend® flake type panels and Versabord® particle type panels. Each has distinctive physical characteristics that make it most suitable to certain specific end-use requirements. Both types of panels are manufactured to meet Commercial Standards CS 236-61.



Flake type panels
Weyerhaeuser TIMBLEND

• Because of its multi-layered flake construction, Weyerhaeuser Timblend offers greater stiffness, flexural strength, dimensional stability, surface smoothness, screw-holding power and has tighter edges than regular particle type panels. These specific properties make Weyerhaeuser Timblend an outstanding core material for decorative plastic laminates and hardwood veneers.



Particle type panels
Weyerhaeuser VERSABORD

• Weyerhaeuser Versabord, because of its homogenous particle orientation, has superior internal bond strength. Panels are smooth, solid, stable and uniform throughout. They are engineered for guaranteed performance as an underlayment for resilient floor coverings.

Both types of Weyerhaeuser particleboards offer important advantages over plywood, lumber and other types of manufactured panels. These include: consistent uniformity, complete absence of grain, knots, voids and surface imperfections, and outstanding warp resistance.

PARTICLE TYPE PANELS

VERSABORD®

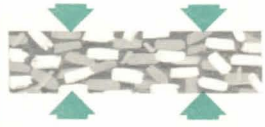


Versabord is an economical, particle type panel specifically designed for use as a floor underlayment material for resilient tile, linoleum floor coverings and carpeting.

It is produced to meet specifications of FHA Bulletin UM-28 "Mat Formed Wood Particleboard for Floor Underlayment" and is accepted for use in construction covered by FHA and VA insured loans.



Versabord is manufactured from clean, dry wood shavings which are dry processed into uniform-sized particles and mat formed into homogenous panels.



The particles are coated with a resin binder and bonded together under heat and pressure to form a solid panel, free from knots, grain, voids or surface defects.



Versabord floor underlayment is performance-guaranteed in writing when installed in compliance with approved precedures. Panels are brand and grade imprinted.

THESE DESIRABLE PHYSICAL CHARACTERISTICS HAVE EARNED VERSABORD A WIDE ACCEPTANCE AS A QUALITY FLOOR UNDERLAYMENT MATERIAL...

UNIFORM THICKNESS

Manufactured to close tolerances, Versabord panels can vary less than 1/100 of an inch in thickness compared to 1/32 of an inch allowed in plywood. This helps ensure level joints that floor coverings can bridge smoothly, eliminating joint telegraphing and tile cracking problems.

SMOOTH SURFACES

Panels are sanded smooth both sides and can be applied either face up. There are no high or low spots to cause uneven floor wear. Versabord is free from knots, grain and surface imperfections that can telegraph through thin, modern floor coverings. Glue spreads evenly and bonds tightly and permanently to flooring.

FLAT AND STABLE

Properly installed panels will remain flat. Moisture content is controlled to a proper equilibrium value. Built-in moisture-resistant properties provide dimensional stability to resist buckling, warping and delamination.

SOLID, RESISTS DENTS

Versabord resists indentation because of a built-in hardness unmatched by other floor underlayment materials. Panels are hard yet remarkably resilient and comfortable underfoot. The solid void-free construction provides outstanding resistance to dents that can result when high weight loads from heavy furniture, women's spike heels or sharp blows are concentrated in small areas.

EASY TO USE

Versabord works just like any other form of wood. Panels cut cleanly with ordinary hand or power tools. They resist cracking or splitting on faces and edges when nailed or stapled. Uniform density throughout, from panel to panel, ensures consistent workability.

SIZE

Versabord is available in 4′ x 8′ panels, 3/8″, 1/2″, 5/8″ and 3/4″ thick.

COST

The basic material cost of Versabord is generally lower than that of fir plywood in grades recommended for underlayment use. In addition, the cost of installing floors is often reduced for further savings.

FLAKE TYPE PANELS

TIMBLEND®



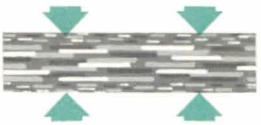
The raw materials and manufacturing methods used in the production of Timblend are specifically designed to create a quality flake type panel with the desirable physical characteristics required for such demanding applications as cores for plastic faced sink and counter tops and hardwood veneered wall paneling, cabinet parts, and sliding and bi-fold doors.



Timblend is manufactured from clean, whole wood. This is sliced into thin, flat flakes, each precision-cut to retain the longitudinal strength of the natural wood fibers.



Flakes are coated with special resins and mat formed in a criss-cross arrangement with surfaces flat and parallel, then dry process bonded under heat and pressure.



Larger flakes are placed at the center of the panel with finer ones at the surface. This provides balanced multi-layer construction for warp-resistance plus smooth, uniform faces.

AUTOMATED MANUFACTURING AND QUALITY CONTROL GIVES TIMBLEND A HIGH DEGREE OF UNIFORMITY IN ALL OF THESE IMPORTANT CHARACTERISTICS . . .

SURFACE SMOOTHNESS

Fine surface flakes, a uniform panel thickness of ±.005″, and smooth sanding of both faces provide a surface ideally suited to the application of fine wood veneers or thin plastic laminates. Filled Timblend is available for painting.

DIMENSIONAL STABILITY

Precision controlled flakes are oriented in layers within panels to ensure maximum flake-to-flake surface contact and stability. Outstanding dimensional stability also results from low moisture vapor absorption rate of the panels. ASTM tests show a linear change value of only 1/10% . . . an industry low.

RESISTANCE TO WARPING

Interlocking flakes are cross-laminated in multiple layers to provide balanced panel construction with excellent warp-resistance. In addition, the low moisture absorption rate also provides resistance to warping.

SCREW-HOLDING ABILITY

Compact Timblend construction provides screw-holding ability comparable to that of softwood lumber. Void-free panels also provide tight, smooth edges suitable for filling and painting or edge-banding.

WORKABILITY

Because it has no grain, hard or soft spots, knots or voids, Timblend's workability is better and more uniform than that of plywood. It saws without whiskering, mortises without splintering, and routs cleanly.

RANGE OF SIZES

Stock panels are available from 2′ x 4′ to 4′ x 16′ in size . . . thicknesses range from 3/8″ to 1-3/16″. Custom sizes in addition to the standard stock panels are also available on special order.

COST

Timblend compares favorably in price with fir plywood in grades recommended for similar end-use applications. Reductions in application costs often result in significant savings.



TIMBLEND Panel types and uses

REGULAR

Bonded with urea type resins for nonstructural interior uses such as wardrobe doors, shelving, paneling, sink and counter tops, cabinet and fixture parts.

FILLED

Factory filled and sealed one or two sides. Provides a smooth surface for painted wardrobe doors, built-ins, and paneling. One finish coat will usually cover.

VENEERED

Offered in a wide range of fine wood veneers. More economical than lumber core panels, comparable in price to veneer core panels. Available factory finished or fire retardant treated.

TOXIC TREATED

Highly resistant to mold, decay-forming fungi and insects such as termites.

PHENOLIC

Bonded with phenolic resins to withstand exposure to extreme moisture and humidity under high temperatures. Resin impregnated or plastic overlays may be hot pressed to panels without weakening them. Can be used for selected exterior applications.

ACRYLIC OVERLAID

Phenolic Timblend is faced with decorative acrylic plastic sheets. They are highly resistant to weather and abrasion. Available in red, green, blue or white fade-resistant colors for signs or nonstructural exterior applications.

PHENOLIC OVERLAID

Phenolic Timblend with high density phenolic resin impregnated fiber sheets applied to both sides. Highly resistant to moisture and abrasion. Used for painted nonstructural exterior applications.

FIRE RETARDANT

UL tested and rated with a flame spread factor of 15. Manufactured to meet Federal Specifications SS-A-118b (Class B). Uses include core material for decorative laminates and other overlays.

Weyerhaeuser

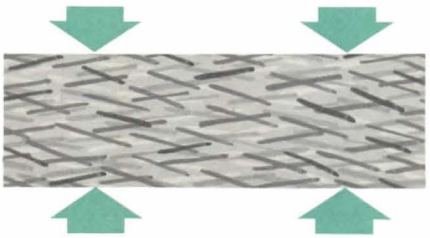
HARDBOARDS

Tough, dense and smooth panels for interior or exterior use





Hardboards are all-wood panels. A mechanical process rubs apart wood chips, reducing them to whole wood fibers which are carefully classified for size and length.



The fibers are air felted and mat formed by Weyerhaeuser's Patented Dry Process into a continuous blanket which is compressed under heat and pressure into panels. Natural wood lignin is the basic binder.

While hardboards are generally well known and widely used, there is a wide choice of panel types and quality standards to be considered in selecting the product best suited to specific end-use requirements. Below is a brief outline of the various hardboard types manufactured by Weyerhaeuser. They are engineered to meet the requirements of Federal Specifications LLL-H-35 and Commercial Standard CS251-63.

Weyerhaeuser hardboards are distinguished by the unique dry-process method of manufacturing which gives them superior impact and breaking strength, smoother, harder and more uniform surfaces, lighter color, better bendability and superior workability.

STANDARD "WEYTEX"
Smooth one side with a screen pattern on the other. Light tan in color. Used primarily for interior applications. Meets Federal Specifications LLL-H-35, Type I, Class I.

TEMPERED "WEYTEX"
Impregnated with tempering liquids and kiln baked for greater strength, durability and resistance to moisture and abrasion. Ideal for exterior applications. Meets Federal Specifications LLL-H-35, Type II.

PREFINISHED "WEYTONE"
Panels are coated with a translucent, light colored sealer, baked and buffed to provide a permanent stain and abrasion resistant surface without additional finishing. Patterns: smooth, plank, block and perforated.

PRIME COATED "WEYTEX"
Tempered panels with a primer uniformly applied to the surface, ready for final paint coats. Finish painting is faster, smoother, longer lasting and coverage is greater. Available smooth or in "U" grooved and striated patterns. Ideal for exterior vertical sidings.

DECORATIVE PATTERNS
Both Standard and Tempered Weyerhaeuser hardboards are available in a wide variety of special decorative surface patterns. These include perforated, striated, grooved, plank and block designs.

SIZES AND THICKNESSES
Weyerhaeuser construction-type hardboards are available in sheet sizes ranging from 4′ x 4′ to 4′ x 16′ and thicknesses from 1/8″ to 5/16″.

COST
Prices of different panel types vary but are generally lower than those of lumber or plywood products used for the same purposes. In addition, further savings are often possible in application and finishing costs.

SAMPLES AND ADDITIONAL INFORMATION

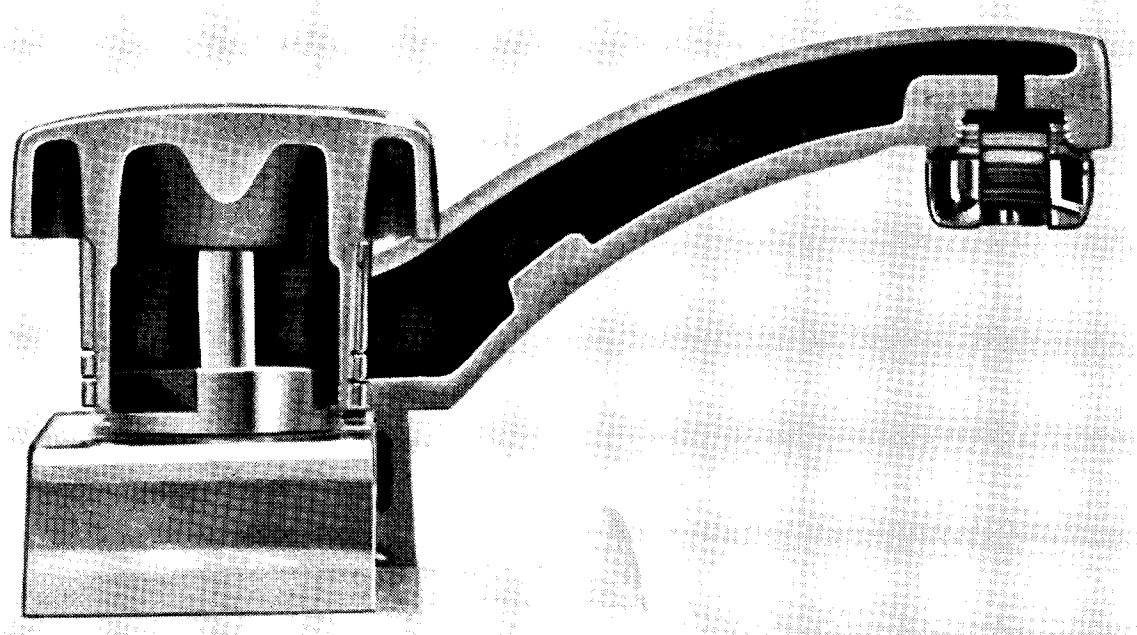
You are invited to contact the Weyerhaeuser Sales Office nearest you for samples and brochures giving complete facts on the selection, specification and use of all types of Weyerhaeuser particleboards and hardboards. This material may also be obtained by writing to Weyerhaeuser Company, Box B-905, Tacoma 1, Washington. Please specify the product or use for which information is desired: Versabord Floor Underlayment, Timblend Flake Type Panels, Weyerhaeuser Hardboards . . . or all three.

These products are sold by the Weyerhaeuser dealers in your area. Warehouse stocks are maintained in a nation-wide network of Company Distribution Centers as a readily available source of supply.



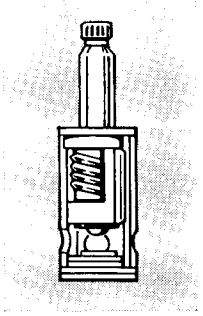
Weyerhaeuser Company Wood Products Division • Tacoma 1, Washington

Who cares what's inside... if it looks good outside?



KOHLER

If it's a Kohler fitting, it's All-Brass.
That's the only kind we make. Because brass wears many times longer than pot metal. Brass resists the corrosive elements in water. And brass holds on to a chrome finish. So, because Kohler fittings are All-Brass they look better... wear longer...and need less maintenance. Do your buildings deserve anything less?



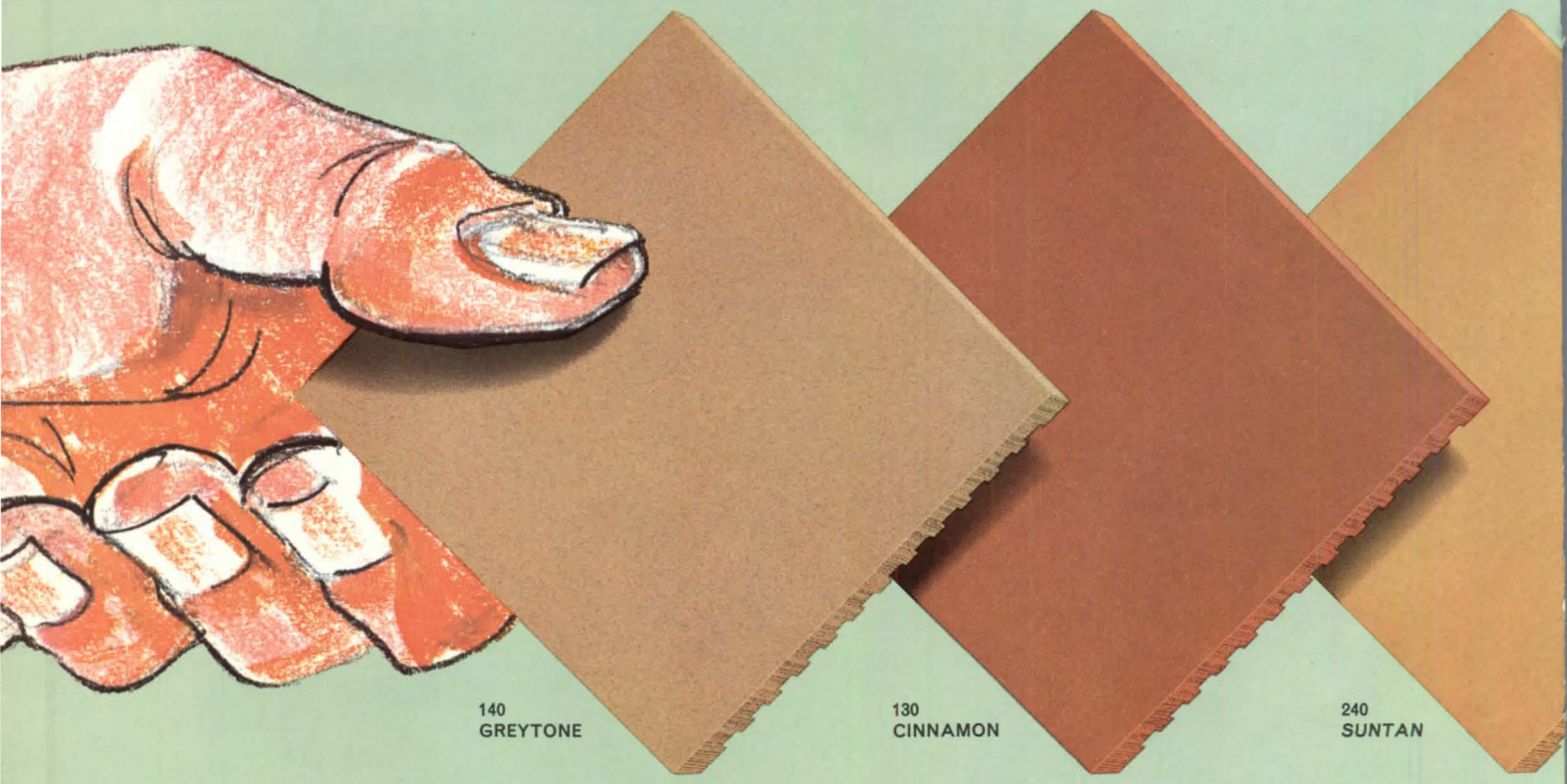
Kohler All-Brass fittings are equipped with Anti-Drip Valvet...
Valvet operates with smooth up and down movement...presses seat washer against valve seat to reduce washer wear. Valvet can be replaced easily—no special tools needed.

KOHLER OF KOHLER

Kohler Co., Established 1873, Kohler, Wisconsin

ENAMELED IRON AND VITREOUS CHINA PLUMBING FIXTURES • ALL-BRASS FITTINGS • ELECTRIC PLANTS • AIR-COOLED ENGINES • PRECISION CONTROLS

For more information circle No. 303



The Quarry Tile with the most in color selection and coast-to-coast servic

QUARRY TILE *by*

Special forms of Carlyle Quarry Tile serve special requirements admirably.

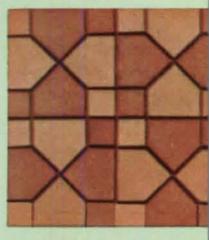
For free estimates on Mosaic Tile, see the yellow pages for your Tile Contractor, Ceramic



GOLF CLUB TILE
Irregular rippled texture gives excellent traction and a distinctively different appearance.



ABRASIVE SURFACE
Abrasive aggregate impregnated in the surface gives non-slip traction at stairs and other problem spots.



CHEROKEE PATTERN
Of the same materials a regular quarry tile, i special cushion-edg shapes. Gives hand crafted appearance.

Golf Club Tile takes the wear in a prominent shopping plaza.



Vitreous Navajo Quarry Tile cuts work in a school kitchen.



The gay "plaid" effect of a Cherokee Pattern enlivens this lanai.





CARLYLE

If there is an "all-purpose" tile, this is it. And the designer can do so many fine things with it. Floors that are charming . . . and built to take a beating, indoors or out. Solid colors, flashed colors or patterns that combine different colors. All with per square foot economy.

For full-size high fidelity printed sample sheets of all Carlyle colors (Ironton only), ask your Mosaic Representative or write The Carlyle Tile Company, Ironton, Ohio.

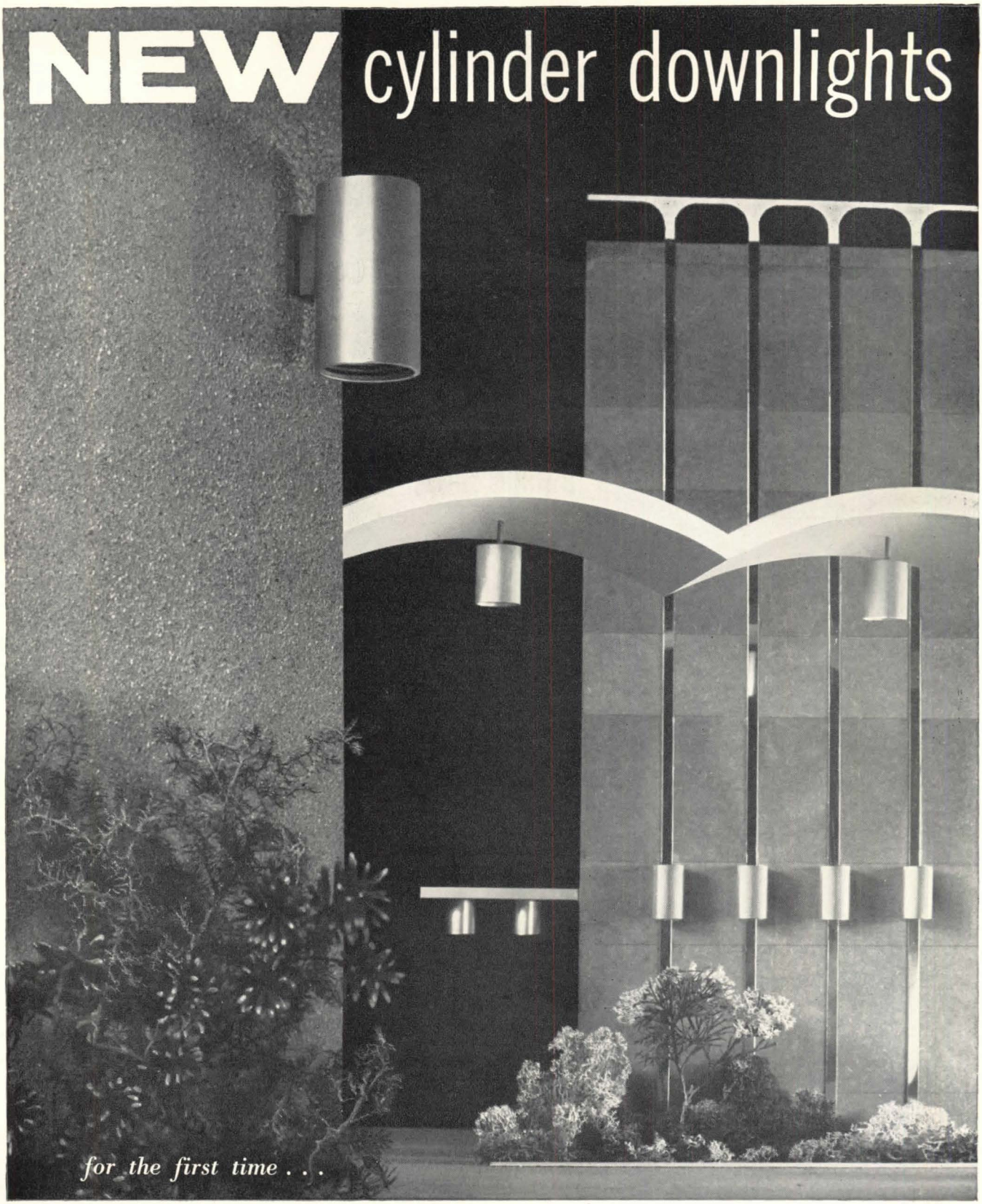
THE CARLYLE TILE COMPANY, IRONTON, OHIO
JORDAN TILE MFG. COMPANY, CORONA, CALIF.

These colors made in Ironton, Ohio. Colors differ West of the Rockies.

**Vitreous*

MOSAIC® *Subsidiaries of The Mosaic Tile Company*

NEW cylinder downlights



QUALITY CAST ALUMINUM TAKES CYLINDER FORM

exclusive **3 line cylinder downlights** for outdoor, indoor and wet locations ■ weatherproof ■ sturdy precision castings, satin anodized for permanence ■ wall, ceiling, pendant, mullion mount ■ 150-200 w. incandescent or 150 w. PAR 38 or R-40 lamp ■ 7½" dia., 10" or 14" deep ■ choice of open baffle, low-bright intensifier, prismatic lens or louver guard ■ up-down light cylinders available in 14" deep wall and mullion bracket series.

write for complete specification data

1329 Willoughby Ave., Brooklyn 37, N.Y.

mcPhilben®

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TORGINOL
DURESQUE

SEAMLESS-RESILIENT FLOORING

CONTINUOUS FLOW OF SEAMLESS-RESILIENT FLOORING WITH PERMANENT BEAUTY

Office, apartment buildings, and homes now can be beautified with a permanent flow of wall to wall seamless beauty that will not collect dirt, moisture or germs . . . Torginol *Duresque* is a combination of scientifically prepared colored chips and liquid glaze that can be solidified over new or existing floors of wood, concrete, and most other firm surfaces. Torginol *Duresque* can be applied to exteriors as well as interiors and utilized as a coving and wainscot providing a monolithic tough thin wearing surface not attacked by most acids, alkalies or hydrocarbon solvents. Exterior *Duresque* is cushioned with Torginol's rubber-like substance, "Torga-Deck" that waterproofs and furnishes elaborate elongation characteristics.

This majestic flow of three dimensional permanent beauty can be obtained in any combination of colors and patterns giving the architect and decorator desiring uniqueness in flooring design . . . *design latitude.*

For further information, check the Yellow Pages for your nearest Torginol Dealer or write:
Customer Relations Department, Torginol of America, Inc., 6115 Maywood Avenue, Huntington Park, California.

TORGINOL
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Does any manufacturer have every major component you need to air condition any apartment?



©Ezra Stoller

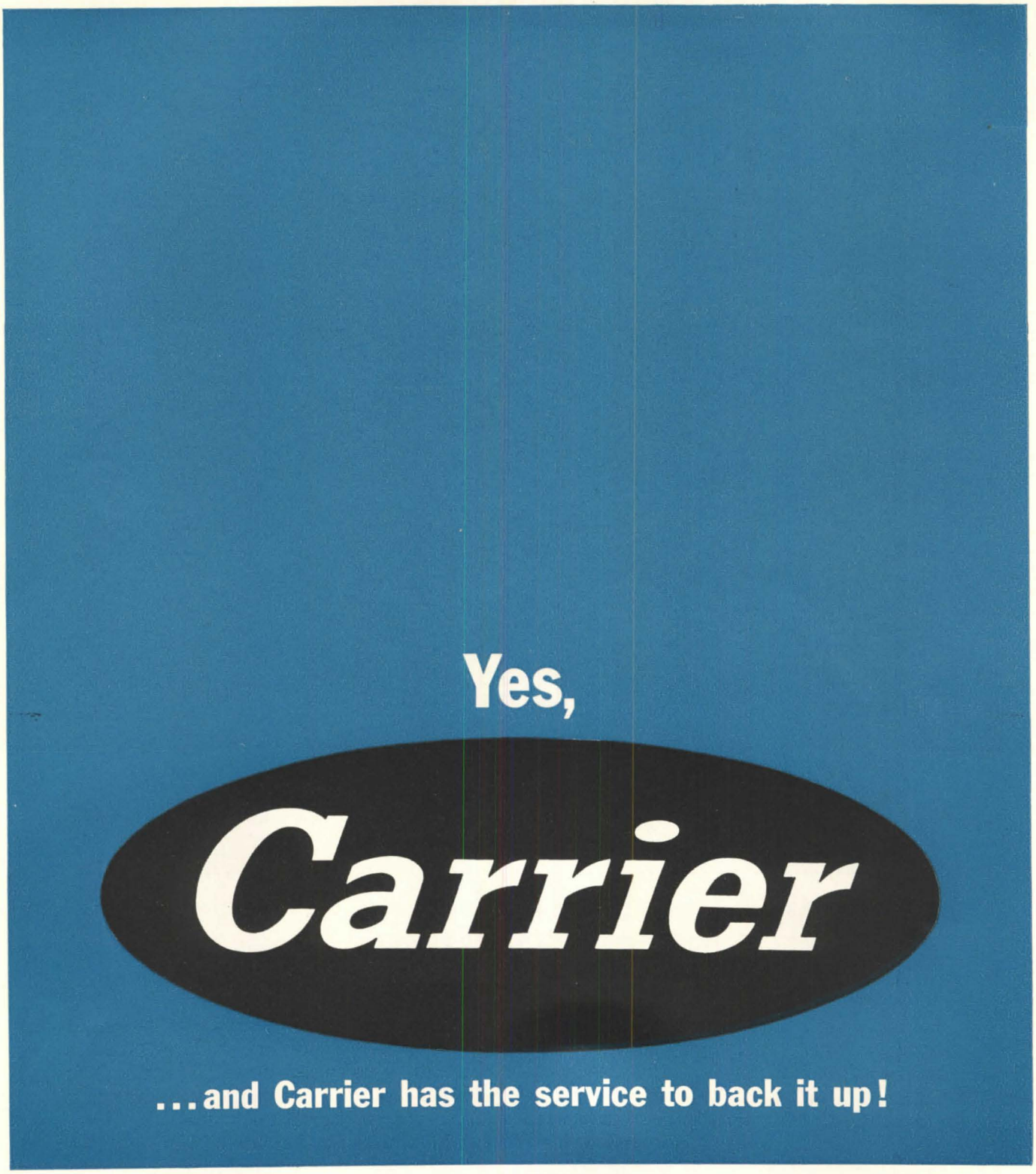
Capitol Park Apartments, Washington, D.C. Architect: Satterlee & Smith. Consulting Engineer: William A. Brown. General Contractor: Blake Construction Company. Mechanical Contractors: R. M. Thorton Inc. and Frank J. Blanch Co., Inc. Property Management: Shannon & Luchs Company.

CARRIER OFFERS:

Hermetic and open centrifugal water chilling packages
The first fully hermetic absorption water chillers
Hermetic reciprocating water chilling packages
Air-cooled, water-cooled and evap condensers; cooling towers
Induction and fan-coil room terminals
Single-zone, multi-zone and spray-coil central apparatus
Supply and exhaust fans; sheet metal specialties
Packaged units; heat pumps; room air conditioners
Also: furnaces; unit heaters; icemakers

The scope of the Carrier line makes possible an installation of matched major components that meet the precise requirements of *any* air conditioning system for *any* apartment. For architect, engineer, contractor and owner, this all-Carrier approach has many significant advantages.

Initially, it simplifies design problems, centralizing responsibility for technical information in the local Carrier office. During installation and start-up, the same office—thoroughly familiar with the job—



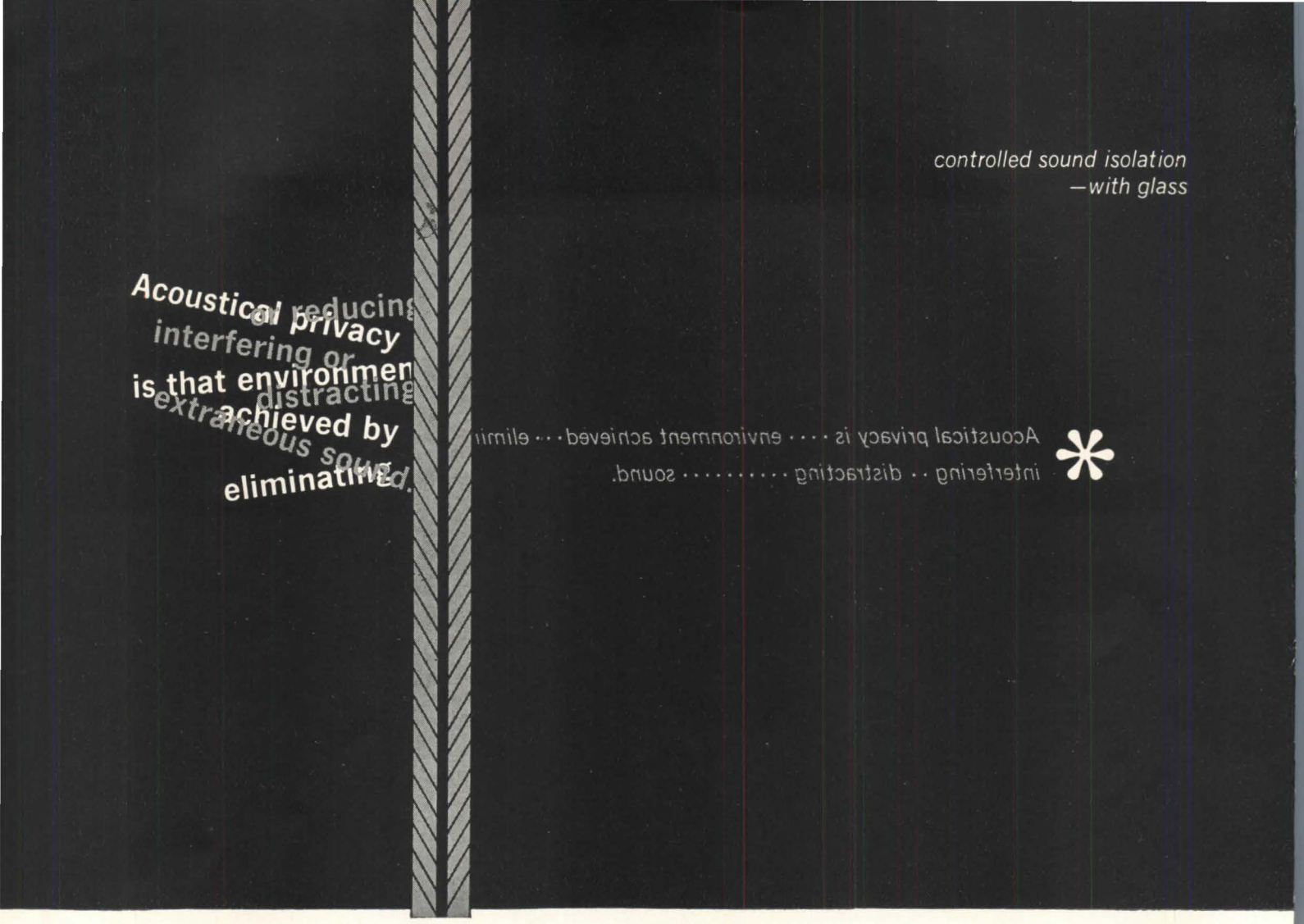
is the fountainhead for everything from delivery schedules to certified prints.

And after the plant has been turned over to the owner, responsibility for proper equipment performance continues to be centered on the same reliable shoulders.

Although not the only air conditioning manufacturer offering a broad line of components, Carrier is best prepared to serve the owner should service be needed. For our company and our dealers maintain the largest and best trained service organization in the business—over 11,000 men strong.

For information about components for *any* apartment job—or *any other* air conditioning project—call your Carrier representative. Or write Carrier Air Conditioning Company, Syracuse 1, N. Y. In Canada: Carrier Air Conditioning (Canada) Ltd., Toronto 18.

Carrier Air Conditioning Company



Acousta-Pane® provides *acoustical privacy**

* *Acoustical privacy is that environment achieved by eliminating interfering or distracting extraneous sound.*

Acousta-Pane . . . the new glass sound barrier developed by Amerada Glass Corporation . . . can be utilized effectively for interior partitioning and exterior walls to keep out extraneous noise and to reduce the sound of speech from adjacent spaces to a level not loud enough to cause distraction outside the area of origin. No other glass gives you the sound isolation properties of Acousta-Pane.

Acousta-Pane is available in standard thicknesses—9/32″, 7/16″ and 5/8″—and is installed as easily as ordinary plate glass. It is shatter-resistant and may be obtained in clear, opaque or with a tint.

The architectural potential for Acousta-Pane is as broad as your imagination permits. AMERADA GLASS CORPORATION, 3301 South Prairie Avenue, Chicago 16, Illinois.

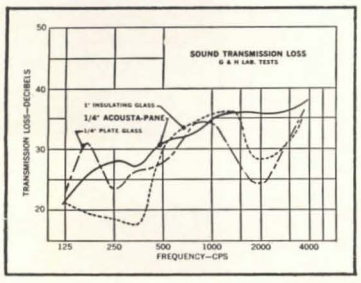


Chart shows comparative reduction in sound transmission of Acousta-Pane compared to 1/4″ polished plate glass and to 1″ thermal insulating glass (two sheets of 1/4″ plate with 1/2″ airspace between). Acousta-Pane is especially effective in the critical frequency range for speech and normal office sounds—from 500 cps to 4000 cps—where ordinary glass is relatively "transparent" to sound.

ACOUSTA-PANE® by amerada

CREATIVITY IN GLASS

See Sweet's 1963 Catalog, Section 7a/Ae

Write for descriptive brochures on Acousta-Pane.

Also available: "Principles of Architectural Sound Control," a free handy reference handbook prepared especially to assist architects in the solution of acoustical problems.

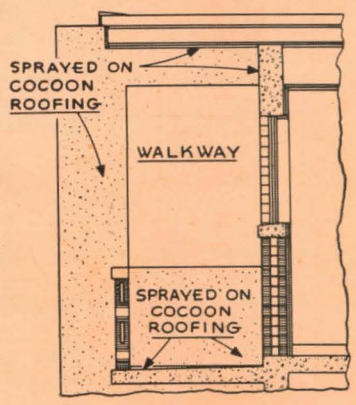
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Wherever there's weather... there's a need for COCOON!®



Architect: Fred W. Schlotterlein

General Contractor: Dominion Contractors, Inc.



In St. Petersburg, Florida, for example:

For this luxurious cooperative apartment on an island in Tampa Bay the architect specified Cocoon as the weatherproof coating for all exterior surfaces and walkways. On a structure directly exposed to punishing salt air, sunlight and seasonal downpours, Cocoon's waterproof, jointless "skin" has an expected life of at least ten years! And at the end of that time, a thin refresher coat will extend Cocoon's life yet another decade!

As well as taking nature's toughest, Cocoon's fire-retardant vinyl surface is highly resistant to deterioration from acids, greases, chemical fumes and fungi. Here, two of Cocoon's 25 colors were used to provide the ultimate in attractive, maintenance-free exterior finish. Take advantage of the world's most versatile spray coating—Cocoon!

SEE SWEET'S 9 HO

P. S. *Cocoon is excellent for interiors, too.*

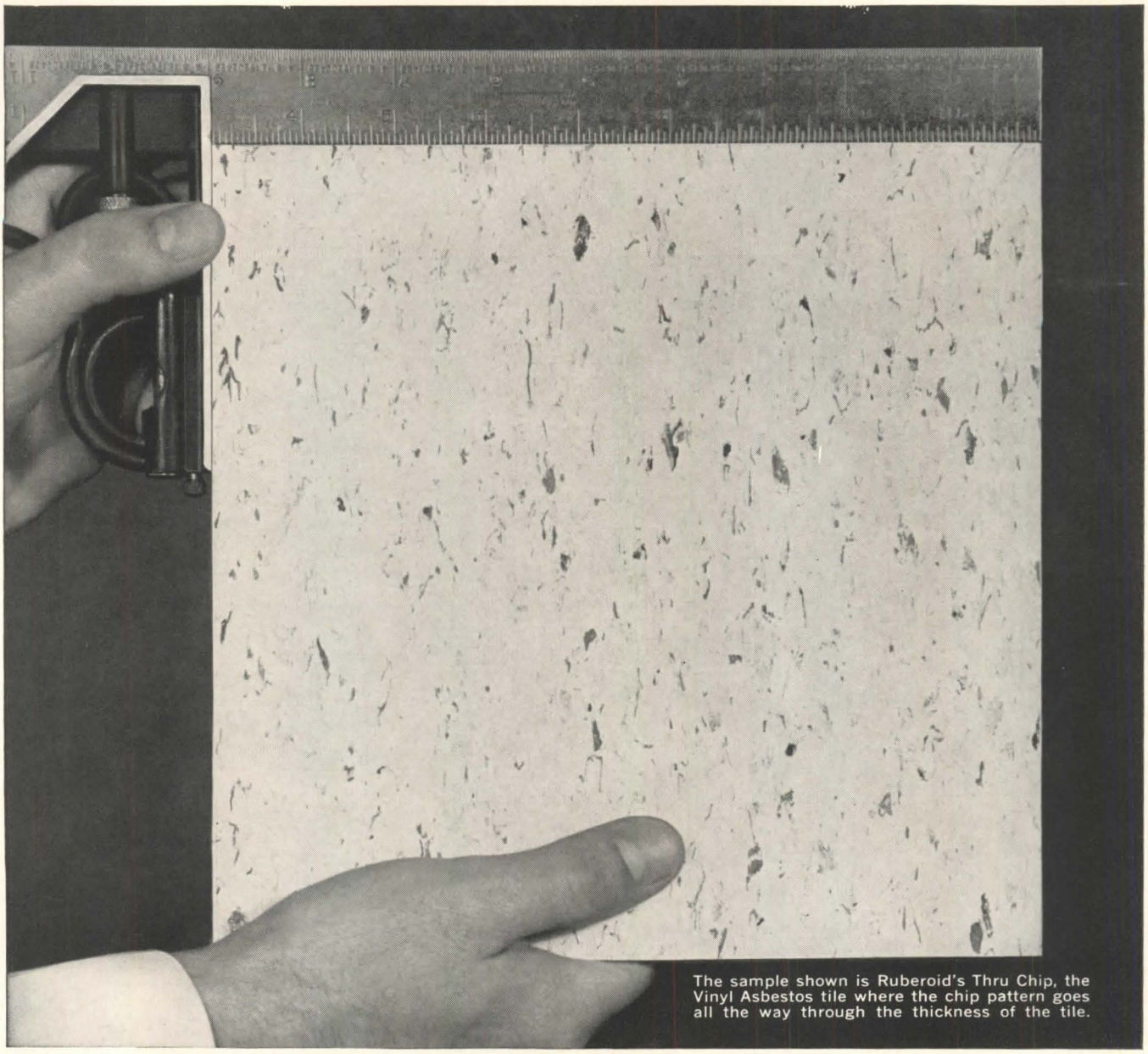


For more details—write, phone or wire:

R. M. HOLLINGSHEAD CORPORATION

Architectural Coatings Division

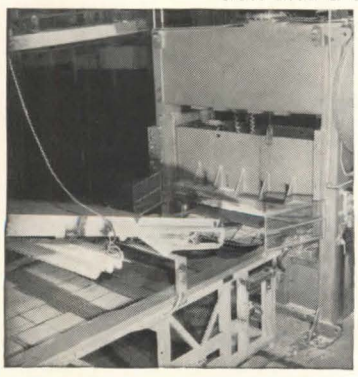
CAMDEN, N. J. ■ SUNNYVALE, CALIF. ■ TORONTO, CANADA



The sample shown is Ruberoid's Thru Chip, the Vinyl Asbestos tile where the chip pattern goes all the way through the thickness of the tile.

Ruberoid quality cuts floor costs...

You can depend on Ruberoid Floor Tile for clean cut edges and square corners. This means tile that fits together properly—resulting in lower cost of installation and a tightly fitted, sanitary floor.



Tracked conveyors guide tile sheets through press, insure squareness and clean cut.

Ruberoid's new electronic quality control equipment also helps assure a tight smooth surface—dimensional stability—resistance to indentation—good maintenance features.

Depend on Ruberoid, too, for fresh new styling, original patterns and textures, color consistency. For quality—beauty—service—specify: *Ruberoid Vinyl-Asbestos Floor Tile.*



RUBEROID

FINE FLOORING

The RUBEROID Co.
733 Third Avenue, New York 17, N. Y.

For more information, turn to Reader Service card, circle No. 363



Nebraska State Education Association Building. **Architects & Engineers:** Davis & Wilson. **General Contractor:** George Cook Construction Company. **Concrete Panel Manufacturer:** Nebraska Prestressed Concrete Company. All of Lincoln, Nebraska.

DAVIS & WILSON selected precast white concrete curtain-wall construction for this association headquarters building at Lincoln, capital city of Nebraska. The panels are made with ATLAS WHITE portland cement and exposed marble aggregate with wire-mesh reinforcement. They are bolted to the structural-steel framework. ■ Of particular interest are the dramatic vertical fins. Though cast separately, these effective sun louvers were attached to the wall panels at the plant. Entire sections, containing 3 window openings and 3 louvers, were transported and erected in one piece. ■ Today, more architects are choosing precast white concrete for the design freedom it offers, plus outstanding contruction economy. Any idea of size, shape, texture and pattern is attainable. For specific information about panels, facings and cast-stone units, see your local precast concrete manufacturer. For a brochure on white concrete in architecture, write Universal Atlas, 100 Park Avenue, New York 17, N. Y.

Universal Atlas Cement
Division of
United States Steel

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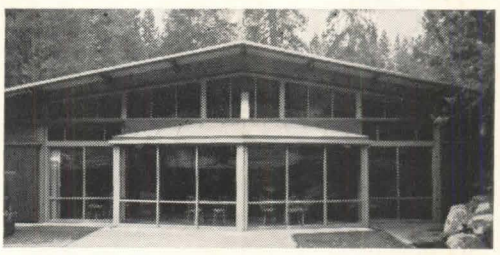


Yosemite Lodge windows and doors seal tightly, work silently, with their original Schlegel weatherstripping

The temperature here can vary anywhere between 106° above and 6° below zero. The annual rainfall is 35 inches and average snowfall is 93 inches. Yet the Schlegel weatherstripping in these Arislide windows and sliding doors keeps the weather outside where it belongs, here, at Yosemite Lodge, Yosemite National Park, California. The Schlegel pile weatherstripping performs as effectively—and as efficiently—as the day of installation. No wind gets through. No wind-blown snow or rain gets in. No chill drafts are felt.

LONG-LASTING . . . Schlegel weatherstripping is made to last as long as your windows and doors. Each pile fiber is locked in, interwoven through a strong fabric backing for performance.

For tight, waterproof sealing, the pile is dense and silicone treated ■ For ease of operation, only resilient natural fibers are used ■ For choice, a wide variety of pile heights and types is available ■ For complete information on Schlegel Woven Pile Weatherstripping, send us your specifications or ask for our catalog.



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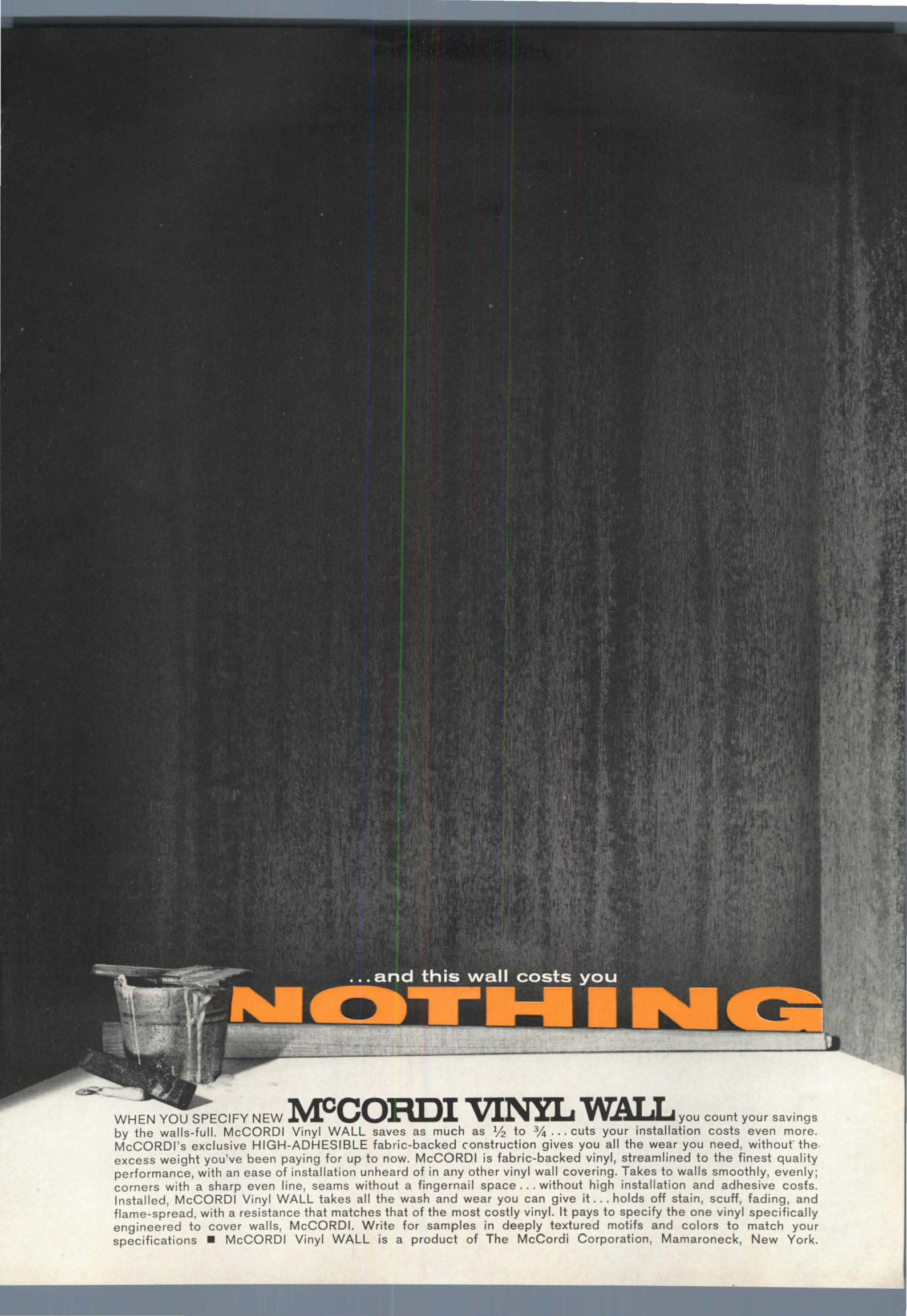
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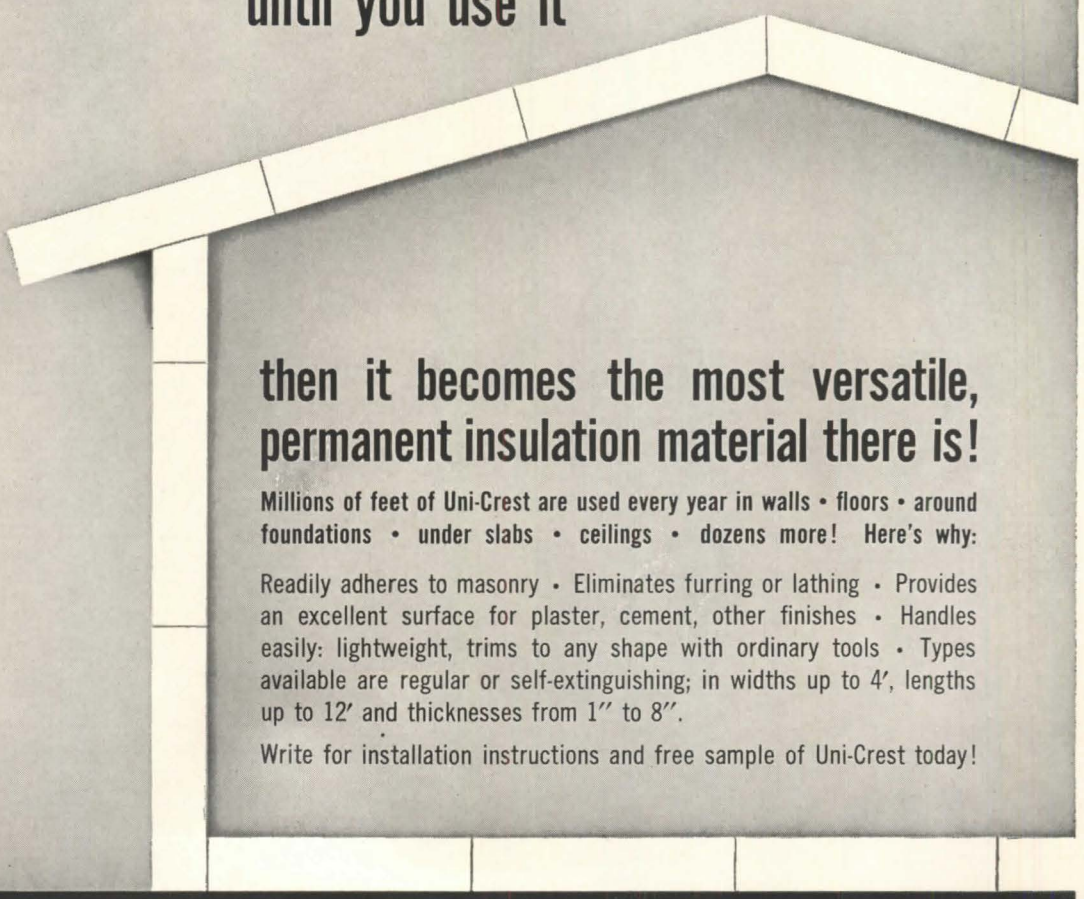


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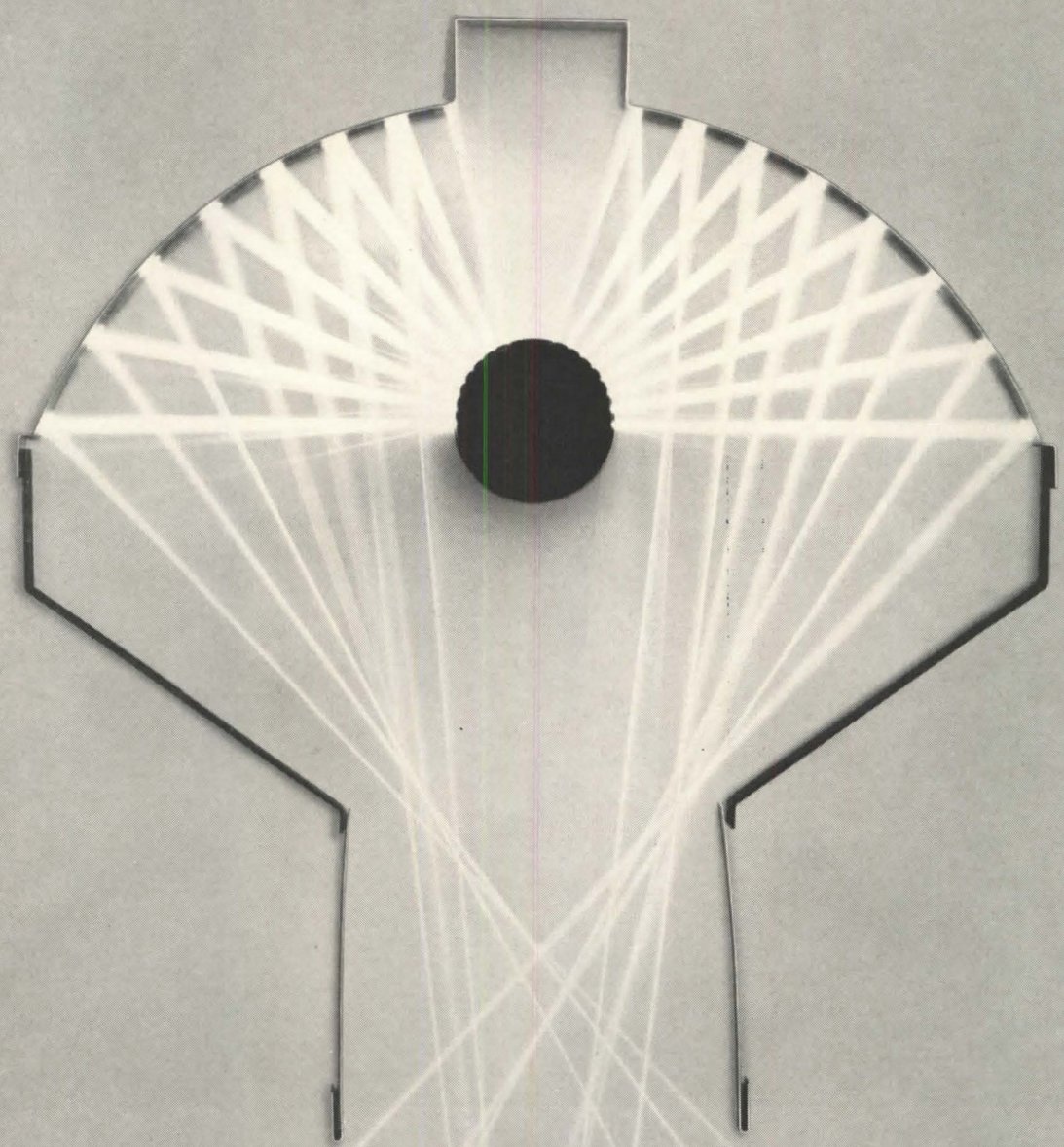
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986	996	300w	6-7/8"
988	998	500w	9-1/8"



At normal viewing angles the brightness of Gotham's recessed low-brightness downlites is so low that the unit hardly seems to be lighted at all. Yet the effect is achieved without any sacrifice of efficiency. This table-top mock-up illustrates the optical principle behind the performance. A mathematically derived specular Alzak reflector gathers the light from a silvered bowl lamp and redirects it through an aperture baffle to produce a wide-angle beam. The baffle's black mirror finish virtually eliminates all brightness above 45°. For data write:* Gotham Lighting Corporation

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Hundreds of builders and architects don't think so. So they've put down carpeting in luxury and semi-luxury homes and apartment buildings in Texas, Minnesota, California, New York and all over the country.

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When you're ready to specify a definite kind of carpeting, consider the kind made with Acrilan® acrylic fiber in the pile.

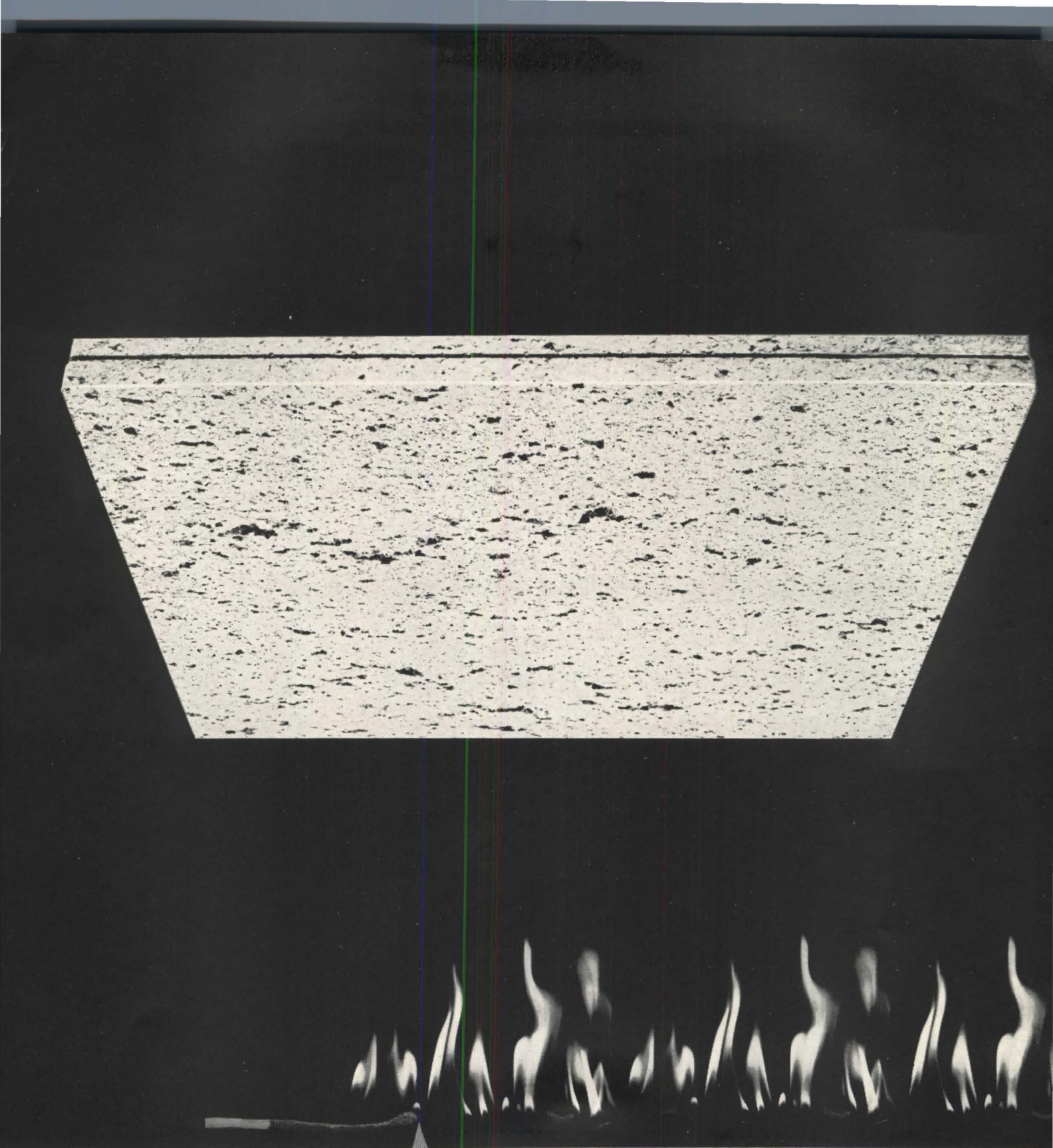
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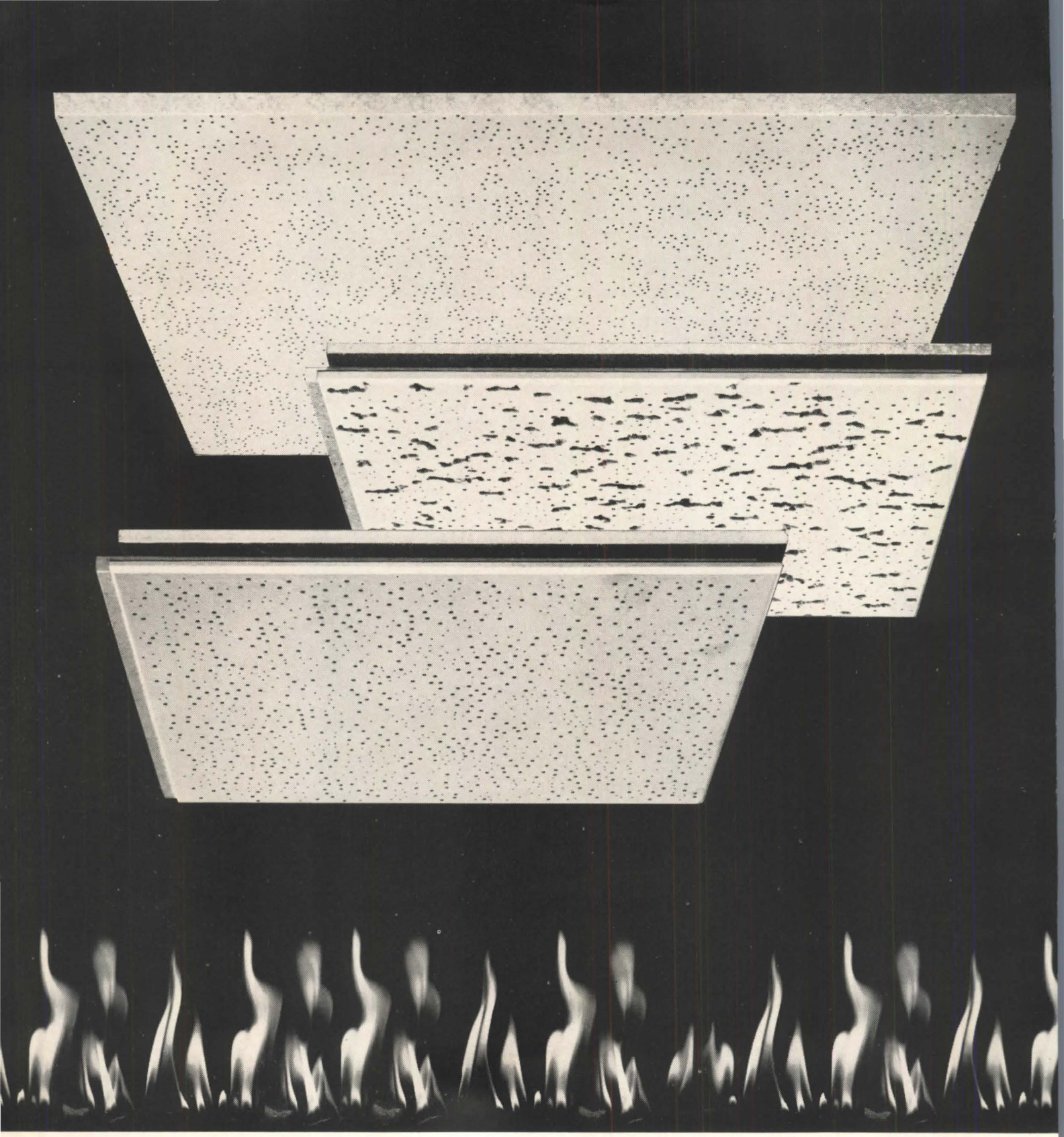
Think about it. And trust the big red Acrilan "A."

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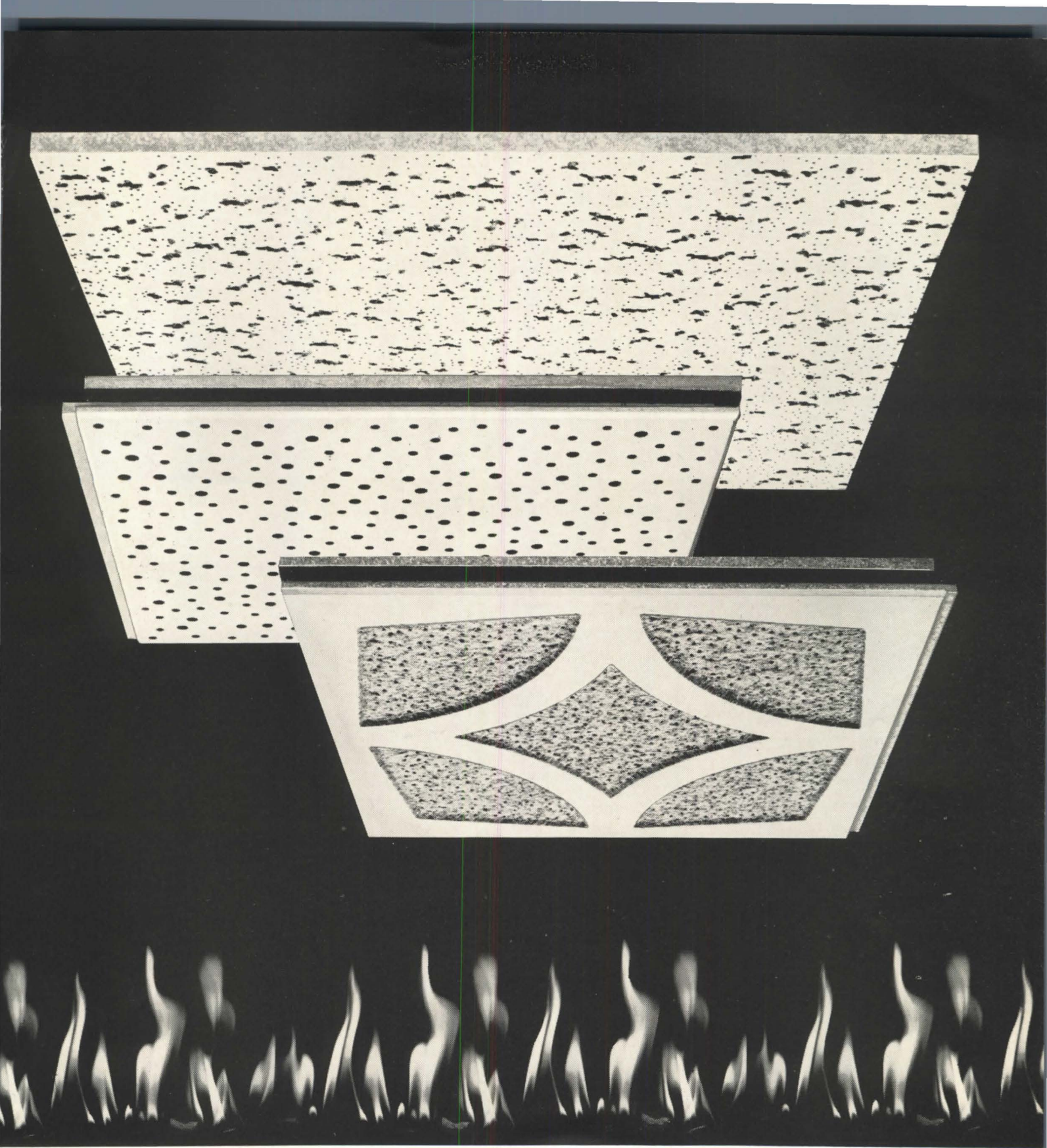
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The Gold Bond difference:
Fire-Shield acoustical ceilings with . . .

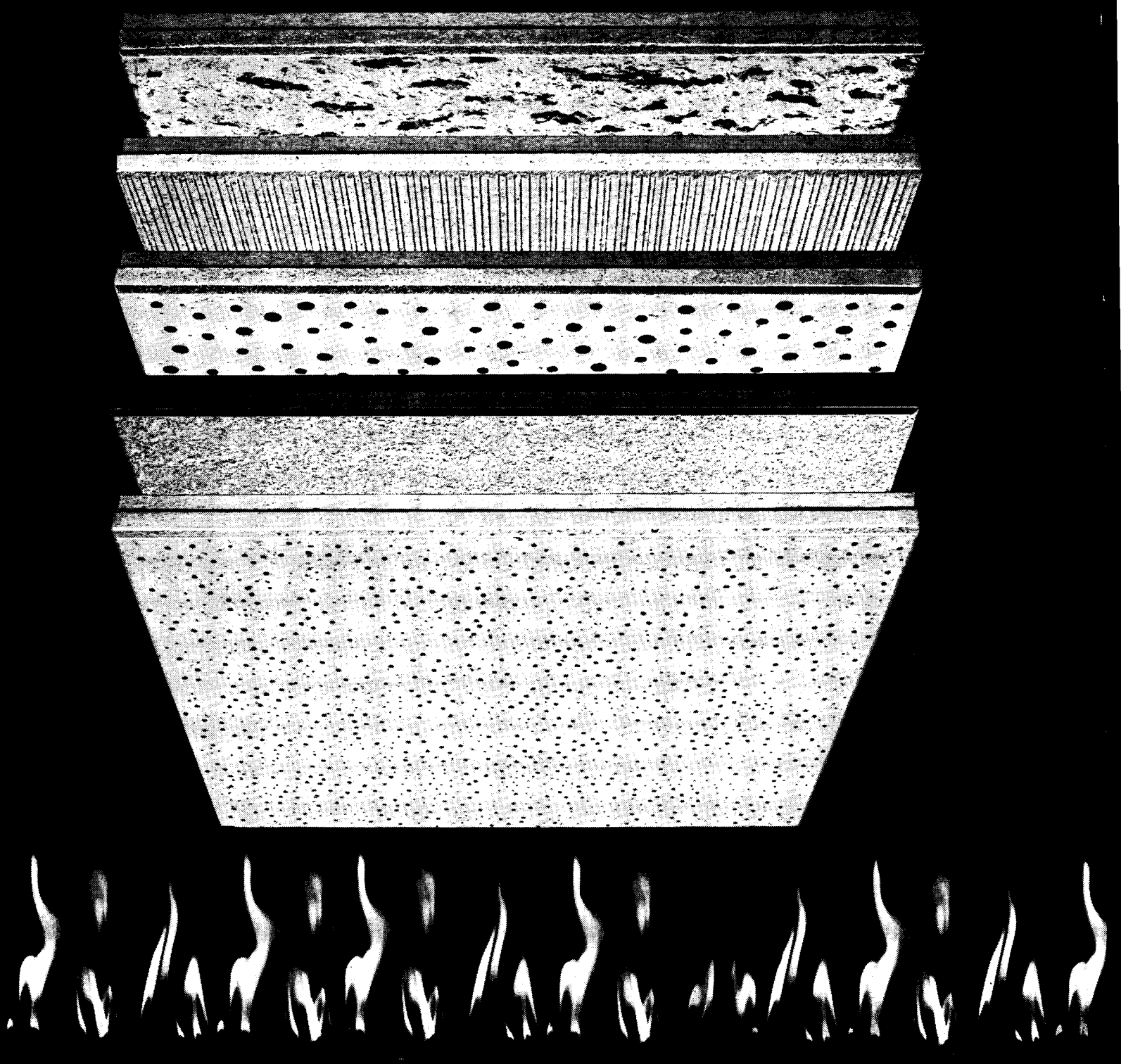


...a wide range of styles and patterns for 1, 2, or 3-hour fire-rated ceiling construction systems



Gold Bond offers you a complete selection of Fire-Shield tiles and panels. Above are some Fire-Shield Solitude patterns. Solitude tiles and panels are made of mineral fibers for good sound-absorption ratings. And they are available in a wide choice of modern and tasteful surface patterns. In panel form, Solitude is square-edged so you can install it fast in an exposed grid system. In tile form, it's tongue-and-grooved for installation with concealed "J" Suspension System. Both tiles and panels can be vacuum cleaned with an upholstery attachment, or repainted with a brush, roller, or spray gun.

Gold Bond®
ACOUSTICAL PRODUCTS



To give you design freedom as well as fire protection

These Acoustiroc tile patterns are kerfed and rabbeted for a neat, clean, handsome installation. The long mineral fibers are uniformly interlocked, so they're resistant to high humidity or sagging. (This can save days in construction time, because there is no waiting until plaster dries before tile is installed.) Now that you've gotten a glimpse of Fire-Shield Solitude, and Fire-Shield Acoustiroc, we'd like to sit down with you and complete the picture. Because no one else in the industry can give a wider range of styles and patterns for 1, 2, and 3-hour fire-rated ceilings. And we have some more facts you should know about. There is a Gold Bond® difference. And it can make a difference to you. National Gypsum Company, PA-73, Buffalo 25, N. Y.

Gold Bond materials and methods make the difference in modern building

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ACOUSTICAL PRODUCTS

where the hardware schedule is complex,

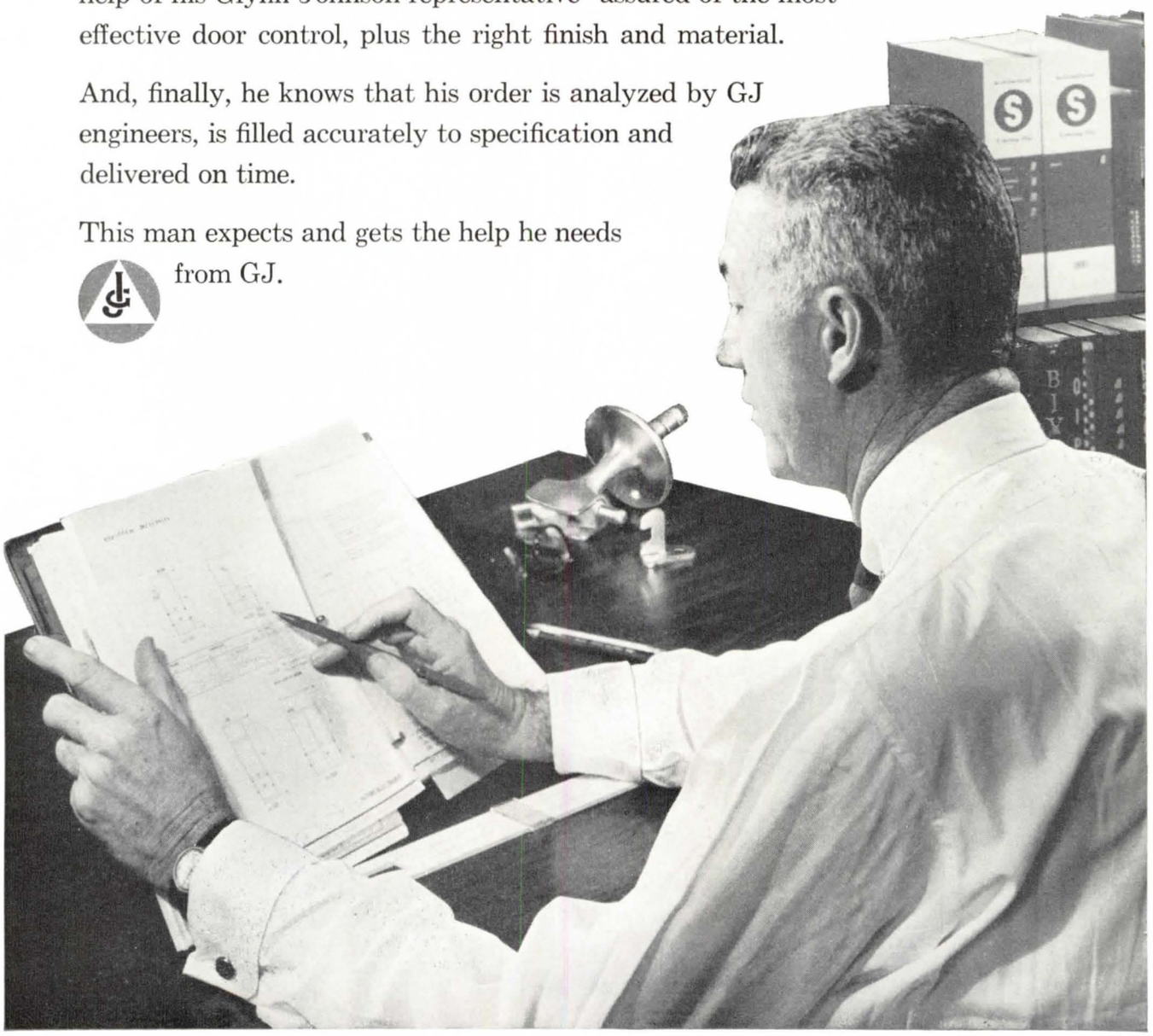
this man specifies...assured of

EXPERIENCED ORDER ANALYSIS

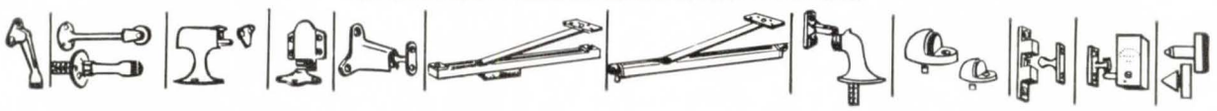
He knows that his GJ catalog offers a wide variety from which to make his choice. If there is a problem he welcomes the help of his Glynn-Johnson representative—assured of the most effective door control, plus the right finish and material.

And, finally, he knows that his order is analyzed by GJ engineers, is filled accurately to specification and delivered on time.

This man expects and gets the help he needs from GJ.

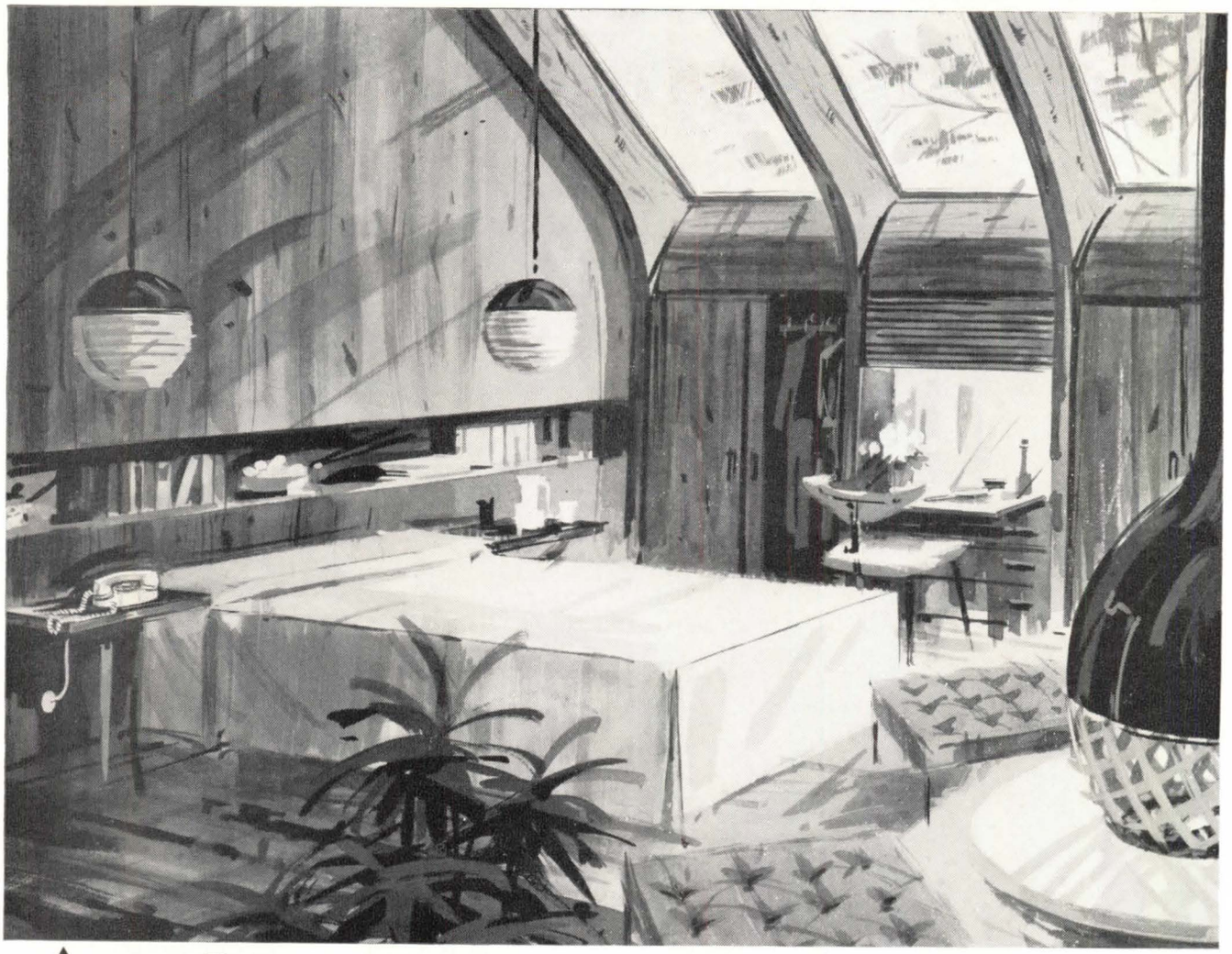


GJ hardware is built to endure . . . and LOOKS it.



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The Princess® phone adds still another touch of convenience to this bedroom. For help in telephone-planning your homes, call your Bell Telephone Company Architects' and Builders' Service. See Sweet's Light Construction File, 11c/Be, for other residential telephone installation ideas.

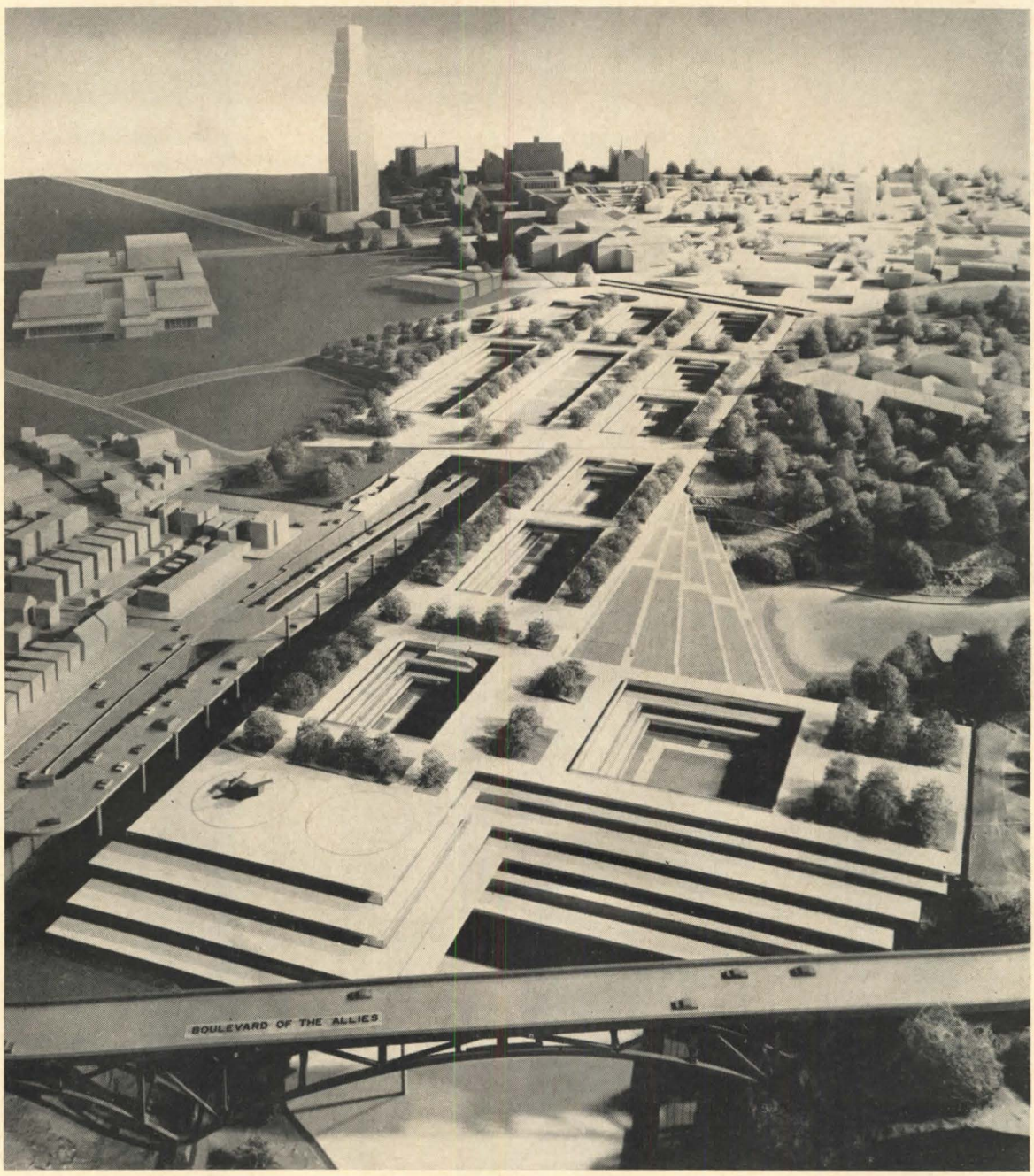
YOU CAN DRAMATIZE a home's comforts by providing for built-in telephone outlets and concealed wiring. This is the modern way to protect interior beauty and serve present and future telephone needs. **BELL TELEPHONE SYSTEM**

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PROGRESSIVE ARCHITECTURE JULY 1963

NEWS REPORT

Architecture's Monthly News Digest of Buildings and Projects, Personalities, New Products



South-north view of proposed Panther Hollow development in Pittsburgh shows tiered design.

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75 MANUFACTURERS' DATA



HOW NOT TO SELECT A HARDWOOD FLOORING CONTRACTOR!

Of *course* you don't flip a coin to select a hardwood flooring contractor. But many *are* chosen simply on a "low" bid basis, without consideration of all factors involved.

Client approval and your professional reputation depend upon expert workmanship as well as quality flooring. To protect and benefit your client and yourself, you naturally want to do all you can to be *sure* you have a competent flooring contractor.

You *can* be sure, if:

- You include in your specifications a wood flooring section. Do not list wood flooring in carpentry or millwork.
- You designate a quality wood floor system requiring installation by an experienced, fully qualified flooring contractor.
- You establish his responsibility for the complete installation from subfloor to finished floor.
- You insist that "low bids" on alternate flooring systems be listed according to:

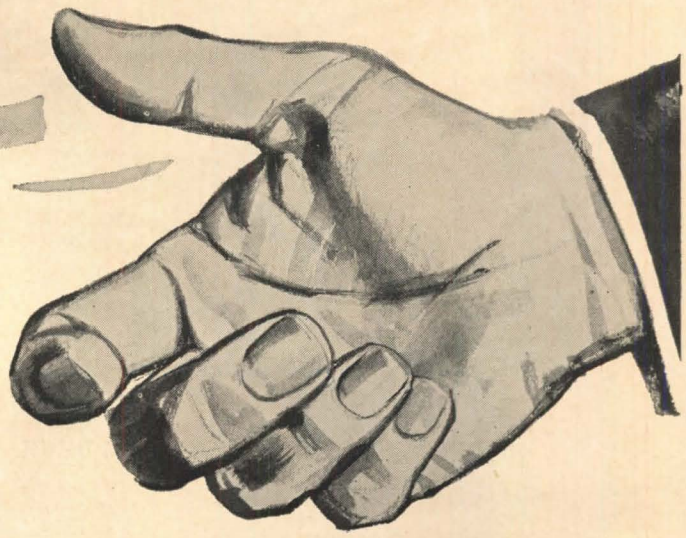
  Sub-contractor
  Proposed alternate system
  Manufacturer co-signing performance guarantee

When you specify Robbins' hardwood flooring systems you call for both quality materials and expert installation. Contractors who install Robbins flooring are selected for their experience, high standards and business competence. They make possible the Robbins guarantee, countersigned by the hardwood flooring contractor with whom you deal personally.

Find out more about your nearest Robbins franchised installer. For his name, write Robbins Flooring Company, Dept. PA-763, White Lake, Wisconsin.



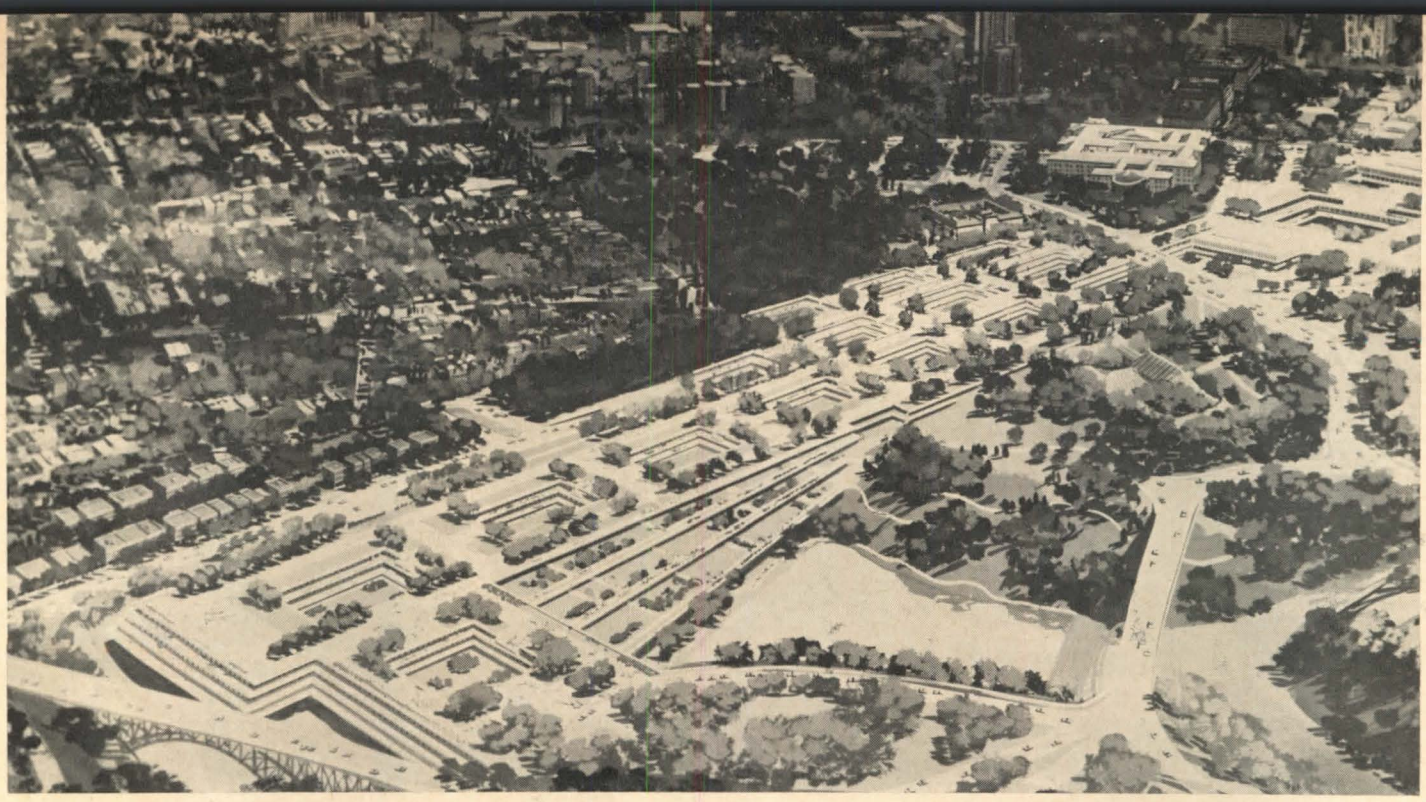
This "Air Thrust" Pneumatic Hard Maple Floor System was installed by Chas. H. Anderson Floors, Inc., Chicago, Ill., in the Prospect Heights Field House, Arlington, Ill. It is an example of a fine hardwood floor system . . . well made . . . well laid.



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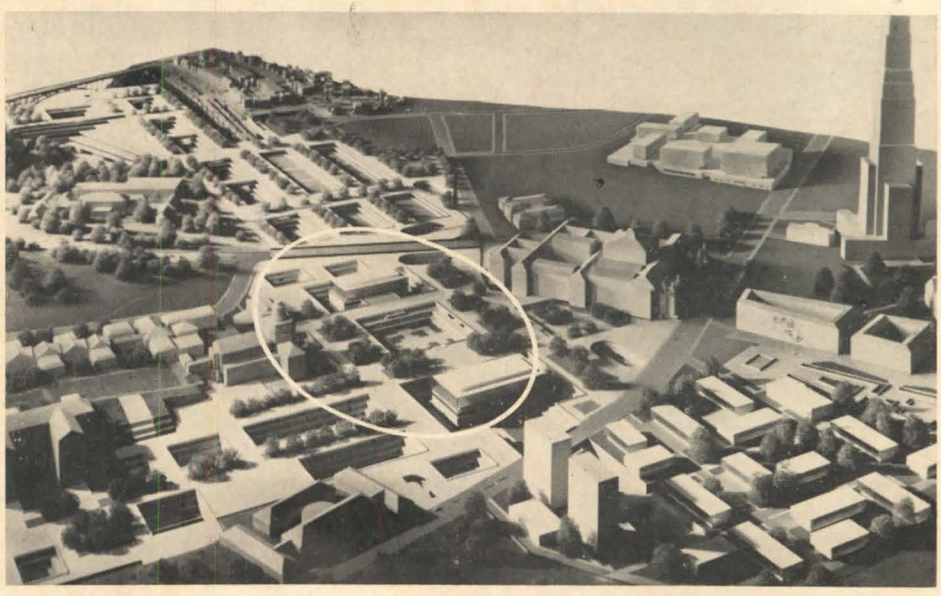


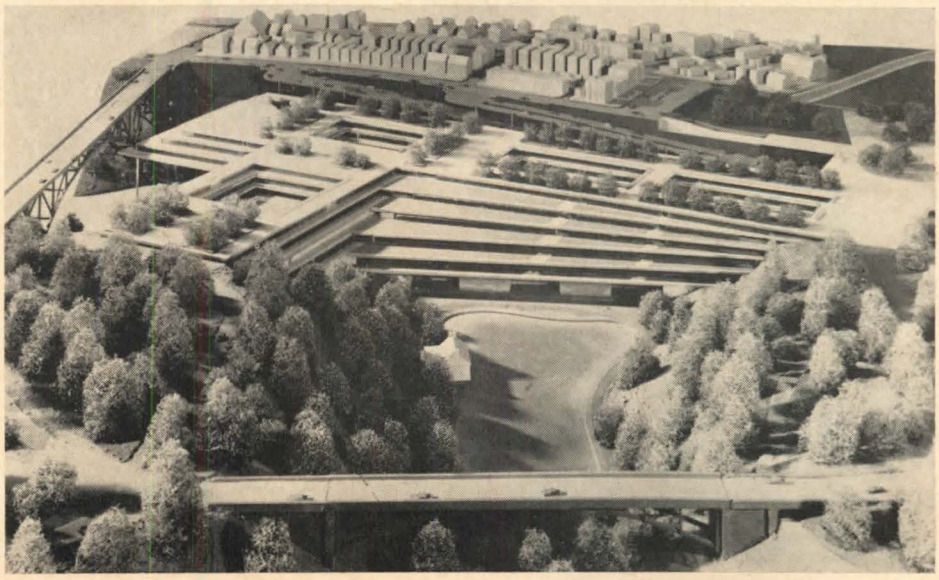
Pittsburgh to Utilize Hole in the Ground

PITTSBURGH, PA. Panther Hollow is a long, 150-ft-deep, 900-ft-wide ravine lying between the University of Pittsburgh and Carnegie Tech in Oakland, which is Pittsburgh's educational and cultural center (other residents: Mellon Institute, Carnegie Museum and Library, Schenley Park, many churches). At present sparsely inhabited and used as a railroad right-of-way, the hollow is being proposed for extensive development as a research center by the Oakland Corporation.

The initial design by Max Abramovitz provides for a mile of the hollow to be developed in three increments (*above*). The first element (*circled, above, right*) would contain, in addition to a test reactor, auditoriums for the Pittsburgh Playhouse, commercial areas, and research facilities for the schools and for private companies. Here would be located the only above-ground buildings of the development.

The two subsequent elements of Panther Hollow would be built in a manner eminently suited to the site. Use of sunken courtyards here will permit the tops of the buildings to be flush with the top of the ravine, thus creating landscaped and planted areas that would, in effect, be a 75-acre extension of Schenley Park. The buildings would be stepped downward to the courtyards to provide maximum light and air for tenants. At the southernmost section of the development (*below, right*), the structures would also fan out toward Panther Hollow Lake in a hanging garden effect, to provide additional terraces and walkways for the general public. Railway, highway, and service provisions would be on the lowest level, and generous parking space would be provided.





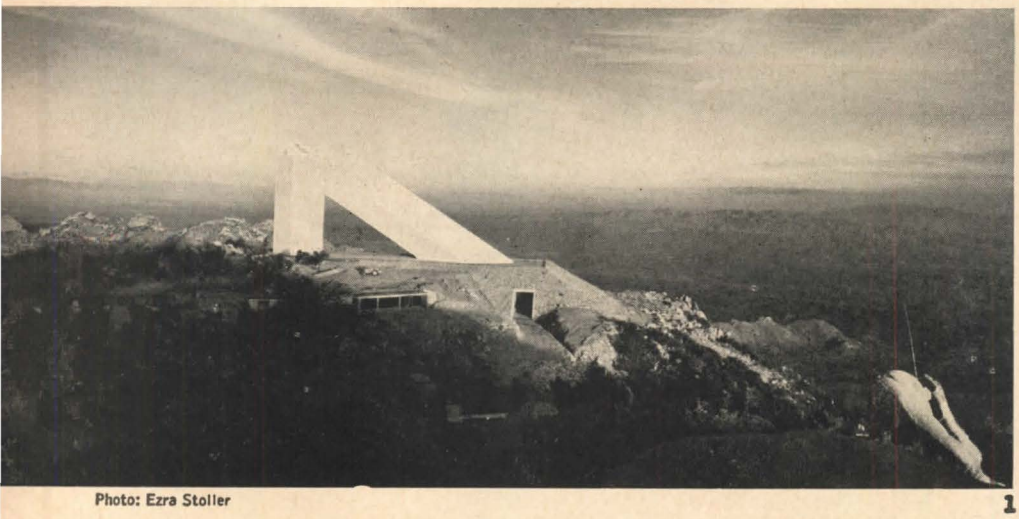
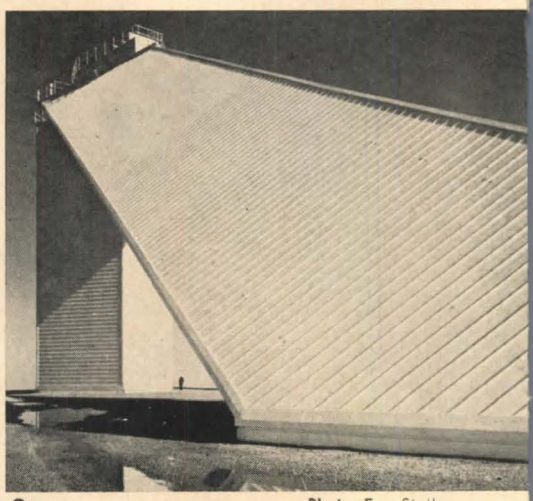


Photo: Ezra Stoller

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Photo: Ezra Stoller

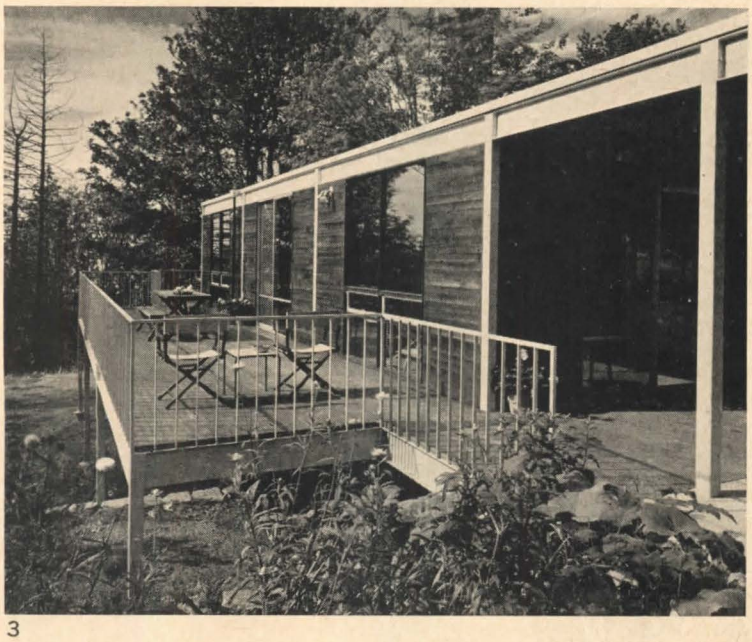


Photo: Charles R. Pearson

3



Photo: Lawrence S. Williams

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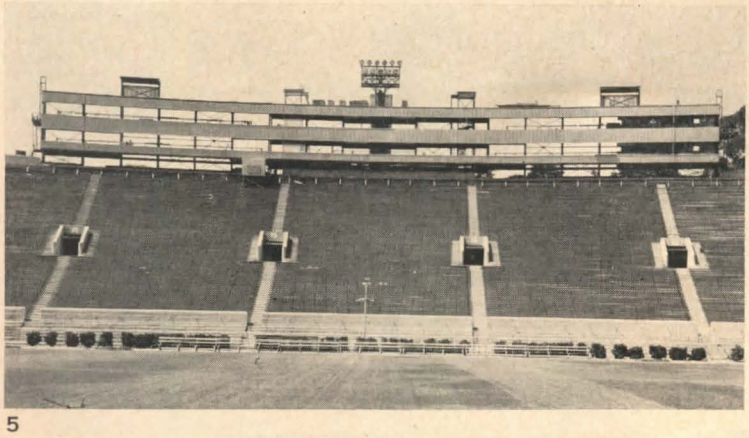


Photo: Modernage Photo Service

5

UNUSUAL BUILDINGS WIN IN AISC AWARDS PROGRAM

The American Institute of Steel Construction, in its annual awards program for outstanding use of structural steel, has premiated nine buildings, some of them quite unusual building types. The jury, composed of Harlan McClure, Daniel A. Hopper, Richard Snibbe, Harold Spitznagel, and John B. Skilling, gave the nod to nine structures, including a solar telescope, a house, a union building, a football press box, a gibbon cage, a steam plant, an office building, an ice rink, and a pier.

The solar telescope for the Association of Universities for Research in Astronomy at Kitt Peak, Arizona, by the Chicago office of Skidmore, Owings, & Merrill (1, 2) was by far the strongest design among the winners. The 500′-long instrument is 200′ above ground and 300′ below.

A neatly designed residence in Seattle by Nelsen, Sabin & Varey (3) combines wood exterior walls with an exposed steel frame for pleasing effect.

A small building for an ironworkers' local union in Philadelphia (4) won praise as a "visual expression of the occupant." Architect was Haasinger & Schwam.

As a direct, undecorated expression of steel construction, the press box



6

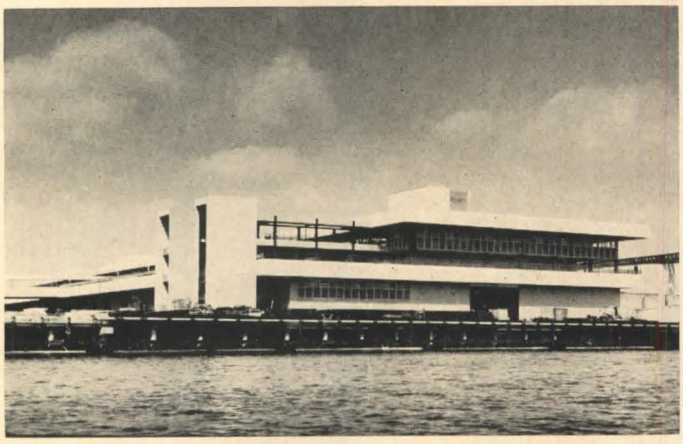


Photo: Bob Jacobson

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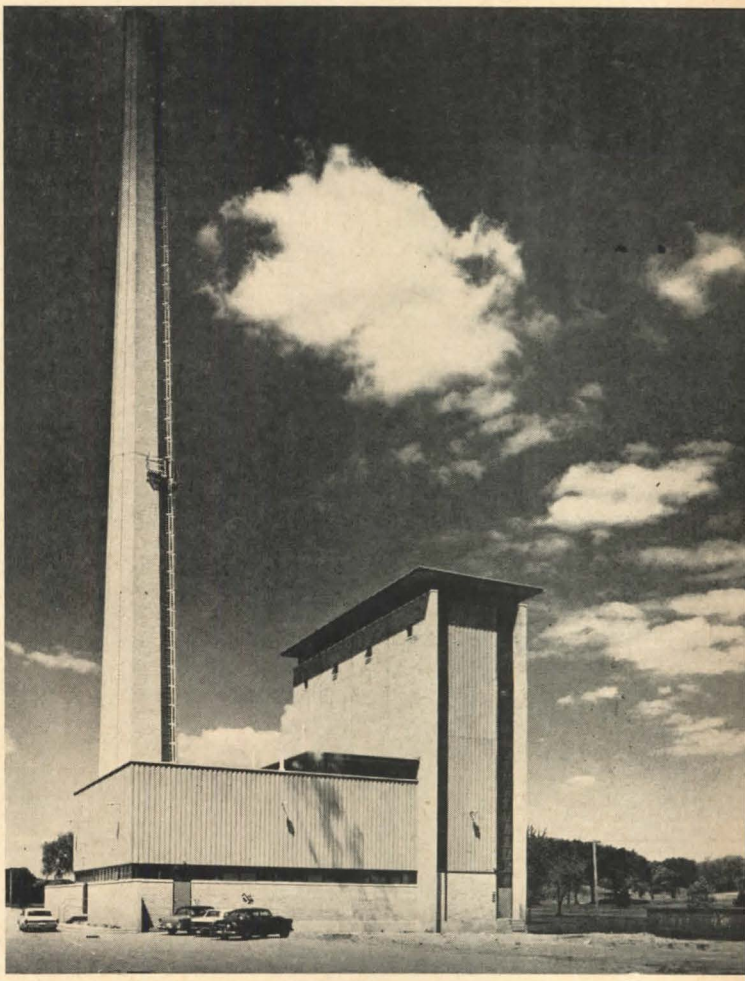


Photo: William Wollin

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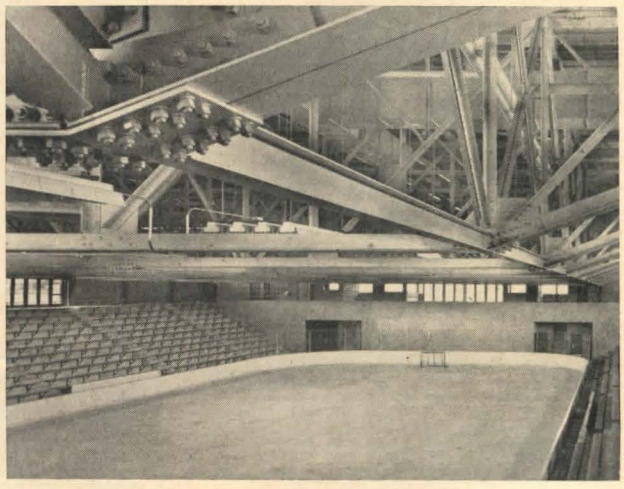


Photo: Amir Farr

for the Rose Bowl in Pasadena (5) merited the judges' praise for architect Breo Freeman.

A gibbon cage, suitable, some may think, to keep architectural editors in (6), won an award for its imaginative parabolic design. It is in the zoo at Oakland, California, and was designed by Oaklander Norris M. Gaddis.

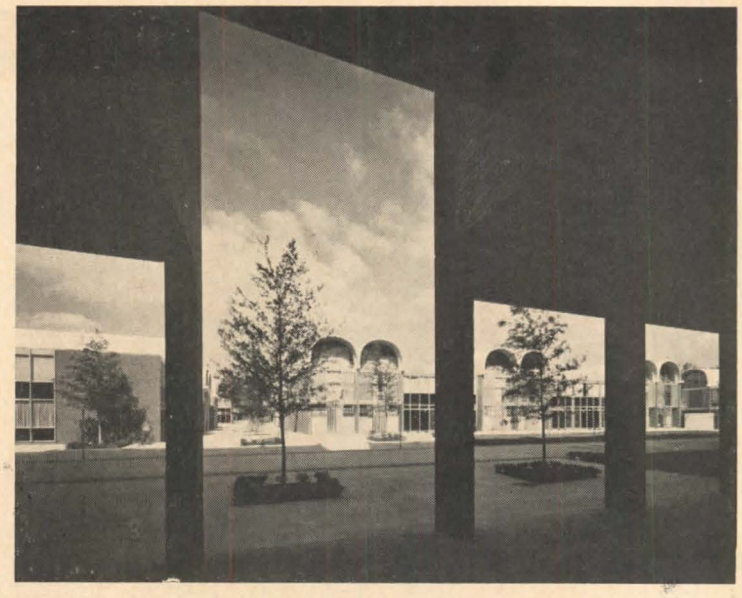
The jury considered the steam plant for the Hill Farm State Office Building complex by M.E. Werner (7) out of the ordinary for this customarily underdesigned type.

Consolidated Marine, Inc., a two-level port facility (8) in San Pedro, Calif., found favor for injecting design values into a problem often lacking in them. Associated Architects: Kistner, Wright & Wright and Edward H. Fickett.

The serpentine shape and careful attention to detail in Vincent G. Kling's American Cyanamid Company headquarters (9) (pp. 112-120, MARCH 1963 P/A) elicited praise. Building has all steel structure.

The roof truss construction of the multiuse Aldrich Recreation Center (10) in Minnesota, by Haarstick, Lundgren & Associates, was found to be "a clear statement of the structural steel."

Renewal by Reynolds



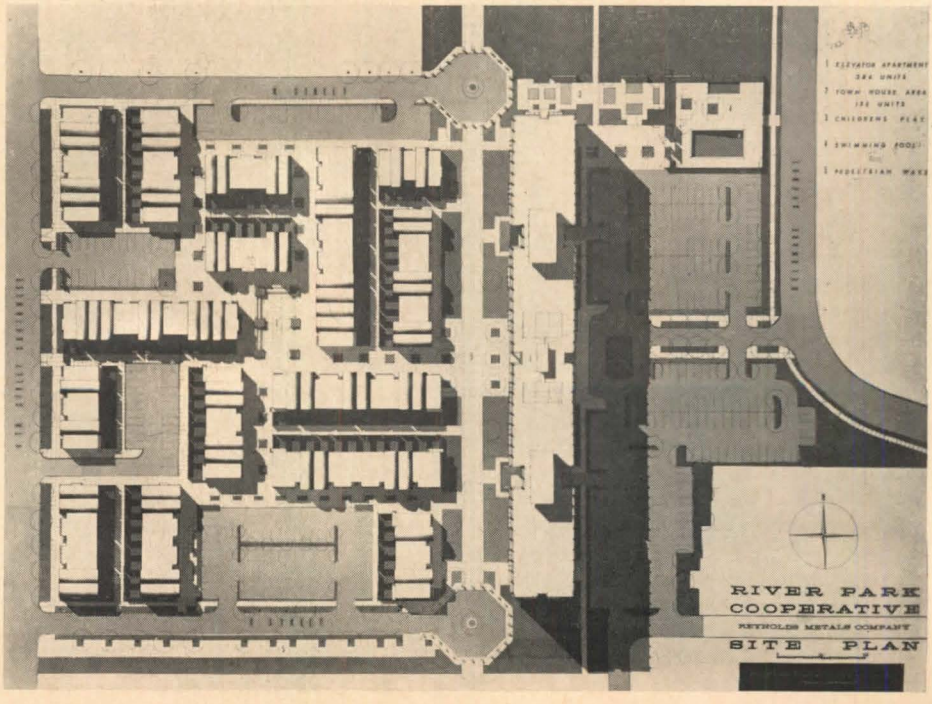


WASHINGTON, D.C. All that glitters is not gold. At River Park development in Southwest Washington's urban renewal area it is mostly aluminum—windows, curtain walls, sliding doors, balcony grilles, sunscreens, ventilating fascia, garden fencing, swimming pool, and play sculpture.

Sponsor of the recently completed project was Reynolds Aluminum Service Corporation, whose primary aim is "to develop urban renewal projects of outstanding architectural design which also serve as showcases of sound use of aluminum." (This subsidiary of Reynolds Metals Company is currently involved in projects in nine major cities, to the tune of more than $280,000,000. River Park was built for $10,500,000.) Major new use of aluminum here is the grillework punched from heavy aluminum sheet—"a far cry," says Architect Charles M. Goodman, "from assembling a series of parts by handcraft methods." Also new at River Park: first application of remote heating and cooling to single-family homes.

When the 518-unit project was turned over to cooperative ownership, all 134 townhouses and more than 95 per cent of the high-rise units were quickly sold. Low prices are partly responsible for this remarkable reception—the largest unit, for instance, a 4-BR townhouse, sold for $1600 down plus $219 per month (excluding heat and utilities).

According to Goodman, River Park is an attempt to create "an environment in which the excitement, as well as convenience, of urban living for young and old may be recaptured." With cars restricted to the periphery of the site, "architecture becomes the visual background instead of automobiles." Indeed, from almost every point in the development, there is a liveliness of courtyard spaces and building forms that is in the richest urban tradition.





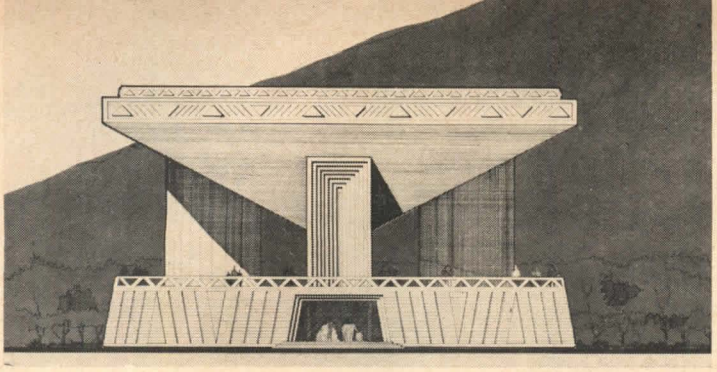
Charles Magruder
1907-1963

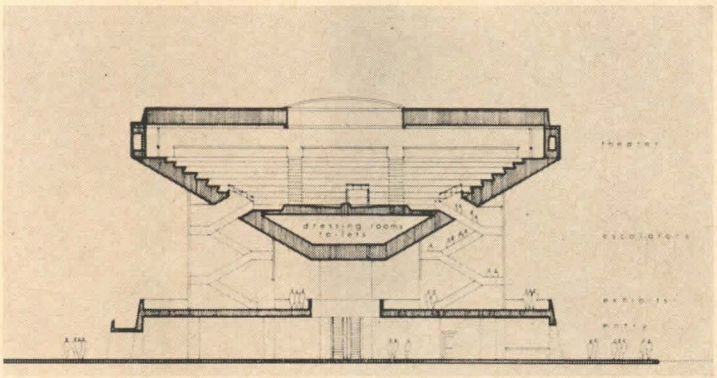
Charles Magruder, Managing Editor of PROGRESSIVE ARCHITECTURE for more than 20 years, died of a heart attack in New York City on June 3. He had been in semi-retirement since March 1961, spending part of his time as consultant on various architectural writing projects.

Following receipt of a B.S. in Architecture from the University of Florida in 1931, he worked with several Florida architects and then became, progressively, reporter, City Editor, and A.P. Wire Editor of the *Tampa Times* in his home town. In 1938, he came to New York and joined *Pencil Points*, as P/A was then known, as Associate Editor. He was advanced to Managing Editor in 1940, the post from which he became the nemesis of sloppy or tardy printers and engravers, the respected mentor of a whole series of P/A staff members, and the professionally and civically active member and officer of such organizations as the American Institute of Architects, the Society of Architectural Historians, the Municipal Art Society of New York, the Architectural League, and the Florida Historical Society. For several years during World War II, he was publications consultant with the Department of the Army at the Engineer School, Fort Belvoir, Virginia.

The many men and women throughout the design professions who knew Charles Magruder were acquainted with the acerb but tolerant wit that was his trademark. Tolerance, that is, for all but the fraud and the sham. As is usual with a modest but dedicated man, his wry observations on architects and architecture concealed a remarkable devotion to the profession, its history and its future. His kind, rare enough to begin with, will always be missed by all who care for quality in endeavor, be it architecture or architectural journalism.

We can visualize him now, having a celestial dry Manhattan, finally with a chance to set right Vitruvius, Michaelangelo, Wren, Gaudi, and all those other chaps.





The strong form of the American Indian Pavilion will house a ground-floor exhibition area, a terrace platform for outdoor exhibits and refreshments, and a theater supported on four immense piers that will also carry stairs and mechanical services. Architect is Seth Hiller, with Associate Architect Perry Duncan, Design Associates George Rehl and Henri Gueron, and Industrial Design Consultant Robert Bengtsson.

The Pakistan Pavilion, by Oppenheimer, Brady & Lehrecke, although quite limited by budget considerations, will have a simple elegance. Use of two sizes and textures of concrete block will lend interest to the walls, and the entrance will feature a waterfall and pool recalling the use of water in Kashmir. A dome reminiscent of Pakistani architecture will occur over the dining area.

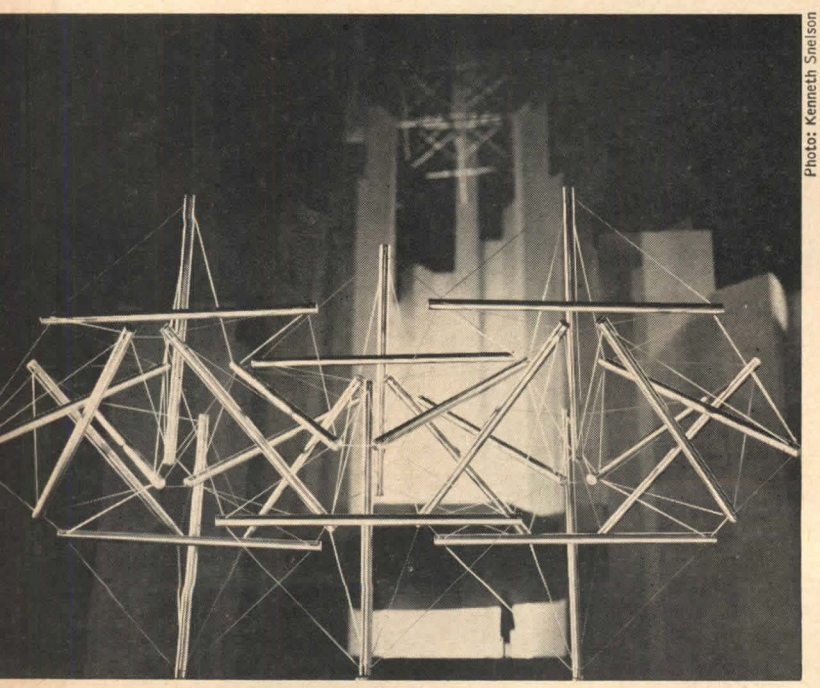


Photo: Kenneth Snelson

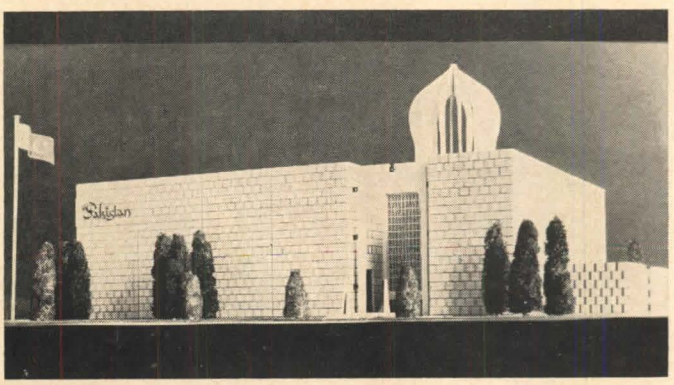
Visitors to the Electric Light and Power Pavilion will pass under a great architectural sculpture of aluminum tubes and steel rods supported on three points. Designed by Kenneth Snelson, the sculpture will be one of three in the building. Architect: Robinson, Capsis & Stern.

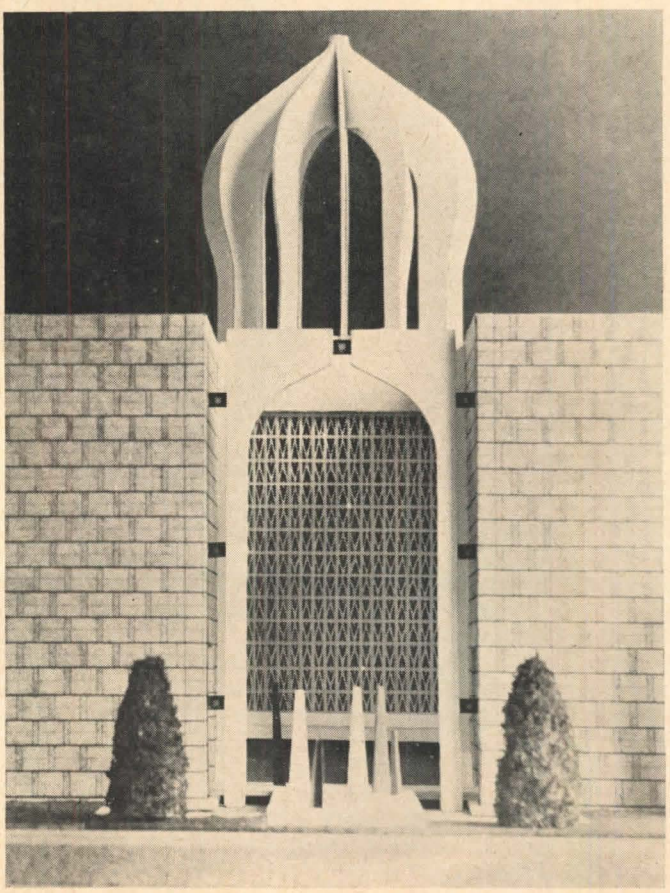
Things Look Up At The Fair

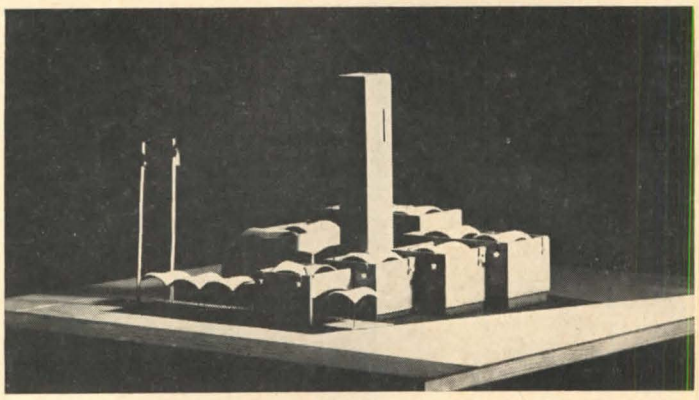
Recent designs emanating from the 1964–65 New York World's Fair have begun to deny the blanket assumption that "Fair is foul and foul is Fair."

Although the exposition scheduled to open next April still has more unleased exhibit and pavilion space than it would like to admit, visitors will nevertheless be able to pick some wheat from the chaff of Fair architecture. (Latest disappointment to Robert Moses was his having to cancel negotiations for the French Pavilion [p. 74, MAY 1963 P/A] for nonobservance of contract terms; *ergo*, no Folies Bergère or Maxim's!)

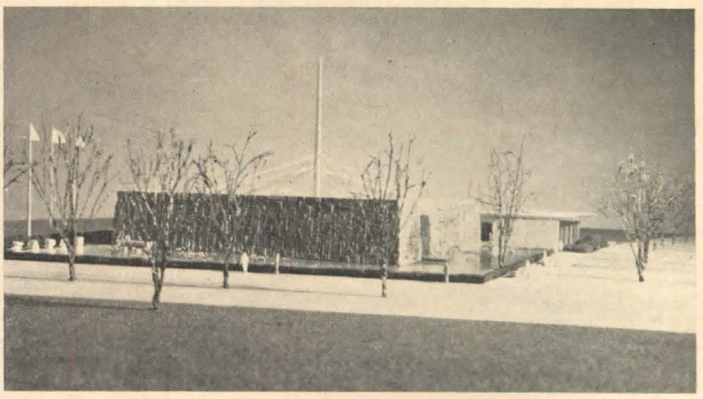
Most pavilions under construction at the fairgrounds right now exhibit a distressingly pedestrian approach to structure. Unusual forms there are, but put together in traditional ways to be covered up with *flashy* skins. Where are the Fullers of yesteryear?

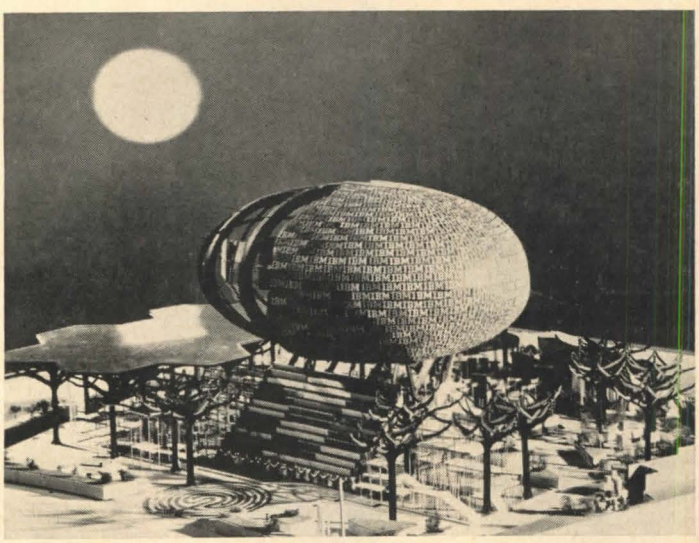




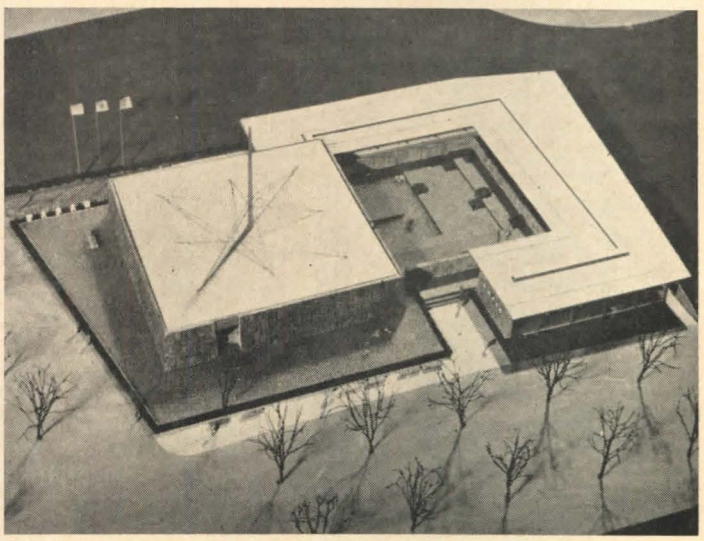


The Lebanese Pavilion has been designed by Assem Salaam & Pierre el-Khoury of Beirut "to recreate the traditional effect of a Lebanese village while not compromising on the contemporary aspect." Nine 20' x 20' units with domed roofs will surround a raised patio, and a 65' tower will house a theater.



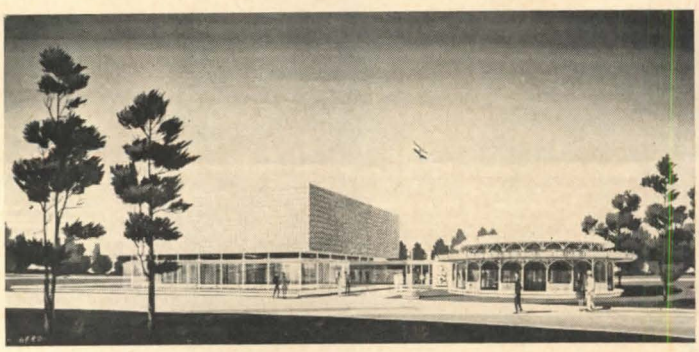


Charles Eames and Eero Saarinen Associates have designed a pavilion featuring a 90', ovoid theater for IBM. The audience will be seated in a movable grandstand, then raised into the theater, where the story of modern information handling devices will be shown. There will be a group of smaller theaters in the project, plus related exhibits and an administration building.



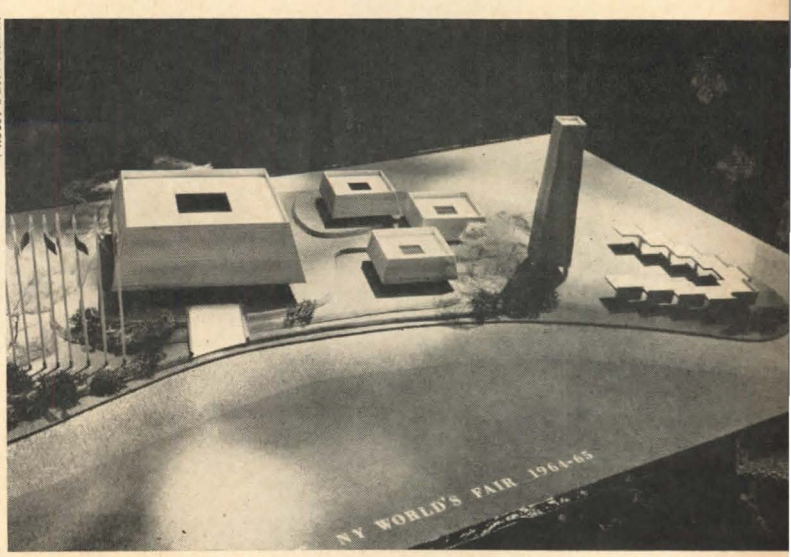
Kunio Mayekawa designed the Japanese Pavilion as a forthright building clad in sculptured stone panels by Masayuki Nagare. The stone structure will be surrounded by a moat, and will, in turn, surround a Japanese garden. The panels will be shipped from Japan for erection on the site. American Associate: Oppenheimer, Brady & Leherecke; Builder: William F. Crow Company.

The Agriculture Pavilion by Seth Hiller, with Associate Architect Perry Duncan, will evoke traditional American farm structures in its form and use of wood and shingles. The project consists of a large, barnlike building housing the main displays, a tower reminiscent of a silo, and smaller pavilions for livestock and produce displays similar in feeling to a county fair.



A curtain of water will fall over the lower, glassed floor of the India Pavilion. The upper floor will be enclosed with a wall of sculptured panels. Across a court will be a circular restaurant serving food prepared in the traditional Indian manner. Architect: Mansinh M. Rana; American Associate: Stonorov & Haws.

Photo: David Hirsch



Total Hydronic Heating System Demonstrated

NEW CITY, N.Y. The first complete hydronic heating system has been demonstrated by the National Better Heating-Cooling Council. All equipment, *which inc*lues hydronic (forced-circulation hot water) baseboard heating, two-zone temperature control, instant hot water from faucet, heated bathtub, driveway snow melting, heated greenhouse, and heated swimming pool, is powered by a small boiler covering only 6 sq ft of floor space and requiring a net IBR rating of 180,000 Btu's.

Four circulators are used at the boiler, one for each of the two heating zones of the house, one for the greenhouse, and one for both the pool and snow-melting heat exchangers. Two additional circulators were employed, one each in the pool heating and snow-melting systems. Each of the six circulators operates independently or in any combination, depending upon the heating requirements.

Special wiring system was utilized, consisting of a combined operating, high limit, and low-voltage relay control on the boiler, together with three separate relays.

The system works as follows: (1) Two-zoned heating control, each with its own circulator and individual automatic control, gives correct temperatures for different requirements of sleeping and living areas. (2) When faucet is opened, water flows through coil in boiler and is heated to desired temperature. Tankless water heating circuit provides hot water only when needed. (3) Bathtub contains heating element in apron to eliminate chill from the tub. (4) Snow-melting system contains a heat exchanger from which hot water is circulated through 360′ of ¾″ copper tubing looped beneath surface of driveway. System is controlled by switch and protected by anti-freeze when turned off. (5) Greenhouse is equipped with radiation similar to baseboard heating. (6) Pool water is passed through filter, and then circulated through heat exchanger which warms it when needed.

Entire system demonstrates flexibility of hydronic heating based on the use of one boiler.



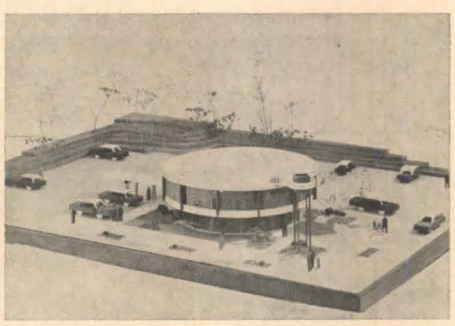
New Chicago Tower

Hard by kindly old Col. McCormick's *Chicago Tribune* Tower and overlooking the Chicago River, the Equitable Life Assurance Society will erect a 35-story building designed by Skidmore, Owings & Merrill, with Alfred Shaw as Consultant. In addition to office floors, there will be three levels of shops and parking below grade. A significant part of the design is the generous plaza, which will lie between the building and Michigan Avenue.



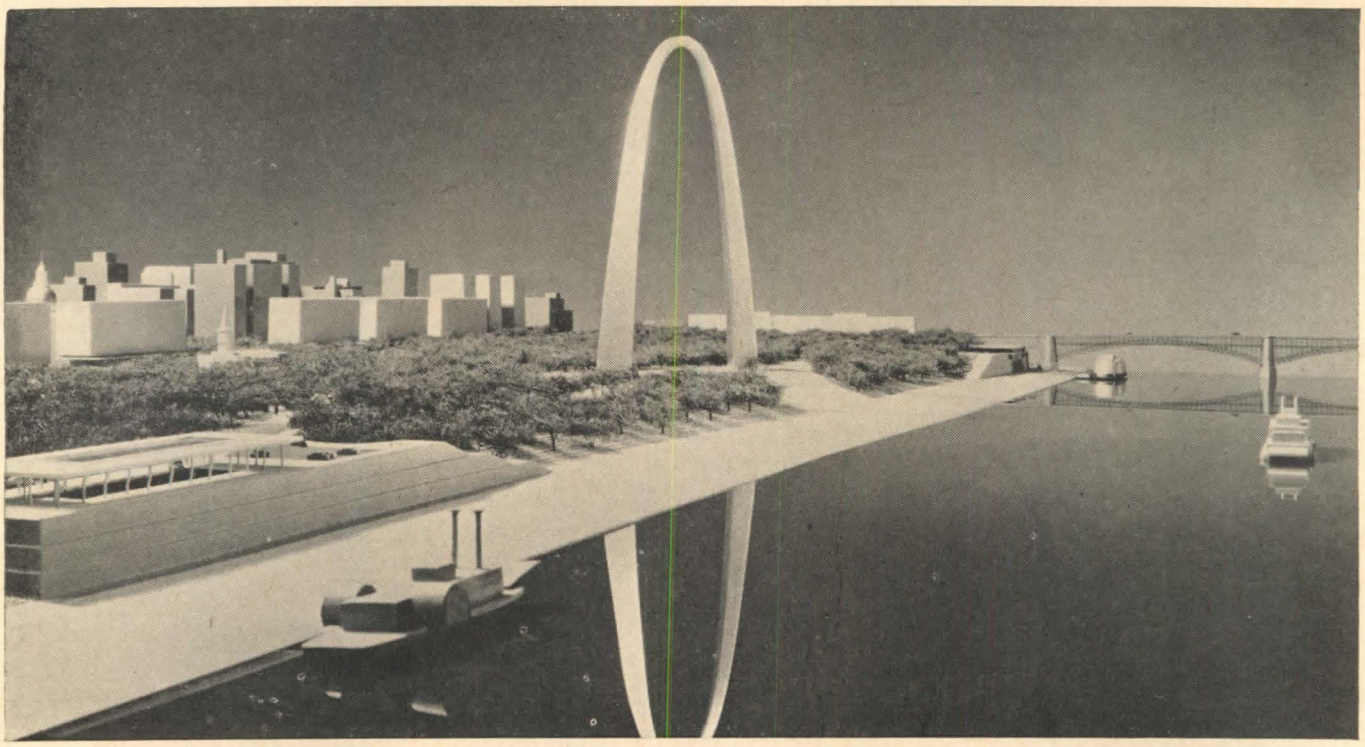
Mets Still Lag in New York

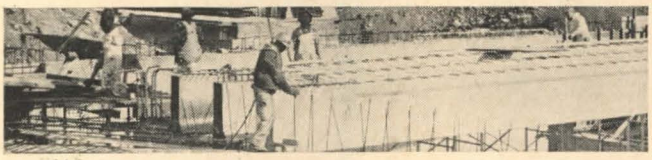
The *interior* design of Wallace K. Harrison's Metropolitan Opera House in New York's Lincoln Center has been announced, and it appears that Rudolph Bing's Mets will be the design equivalent of Casey Stengel's. Press releases for the new design proudly proclaim that it is an "extension and improvement" of the present fustian headquarters of the opera company. To all appearances, Harrison's auditorium preserves exactly what made the Seventh Avenue house so odious to many patrons: a high, narrow space that provides poor sight-lines for viewers sitting in the side balconies. It is also interesting to note that the Lincoln Center mandarins have seen fit to increase the number of expensive seats and decrease the number of seats available to the modest pocketbook. Shades of Otto Kahn.



Circulating Money

Two-story circular structure under construction will house Proctor Bank, a branch of United Mutual Savings Bank, in Tacoma, Washington. Designed by architects Harris, Reed & Wilson of Tacoma, the second story of the prefabricated structural-steel building will cantilever over the first. All steel columns and roof beams are to be exposed. Three tellers' cages, the manager's office, and a conference





GENERAL CONTRACTOR:
MacDonald Construction Company, St. Louis, Missouri.
PRESTRESSER AND PRECASTER:
Precon Concrete Products Co., St. Louis.
ARCHITECT:
Eero Saarinen and Associates, Hamden, Conn.

Prestressed Concrete Beams Selected for Visitor Center Under Gateway Arch

Thirty-four 62-foot prestressed concrete beams, each weighing approximately 25,000 pounds, play a key role in the construction of the Visitor Center under the majestic Gateway Arch in St. Louis. These beams are used to obtain a clearspan roof structure over two underground theaters. When the project is complete, the beams will support about two feet of earth in addition to conventional live and dead loads. The Arch and Visitor Center are central elements in the new Jefferson National Expansion Memorial on the St. Louis waterfront.

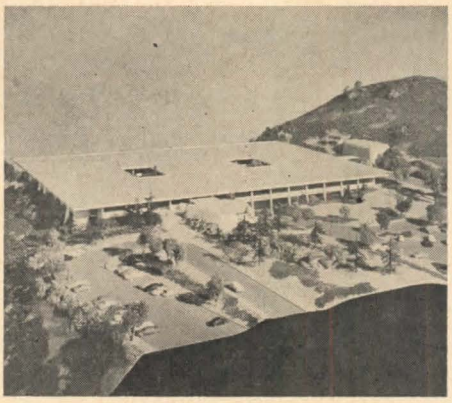
Each beam is draped and depressed at two points, 10 feet off center each way. Precasting and prestressing were done by Precon Concrete Products Co., St. Louis. Prestressing strand is Union Tufwire, with 28 3/8" strands per beam. Tufwire Strand and Union Wire Rope products are made by **Sheffield Division, Armco Steel Corporation, Department S-1103, 7100 Roberts Street, Kansas City 25, Missouri.**

ARMCO Sheffield Division

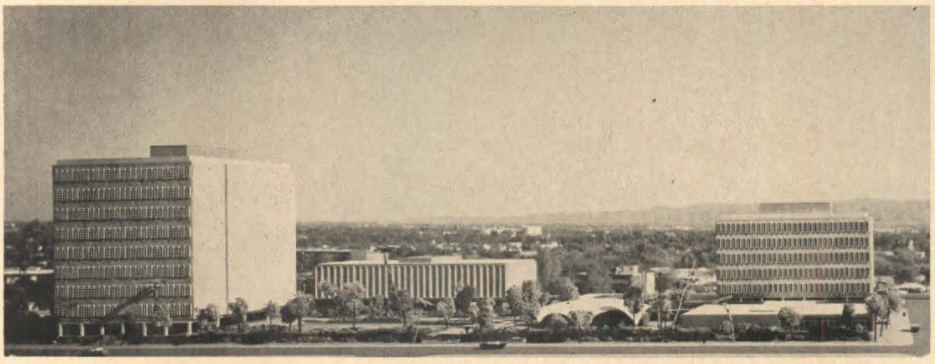
room will encircle a central lobby. Upper level will include business offices, heating equipment and storage, and a meeting room, all of which will surround a circular balcony extending over the lobby below. Upper level uses cedar siding and glass, with cement plaster trim at roof fascia, and second-floor soffit.

Raising Scientists

North American Aviation has broken ground for its new 114,000-sq-ft Science Center in Ventura County, California. Plans by architect Albert C. Martin & Associates call for raising

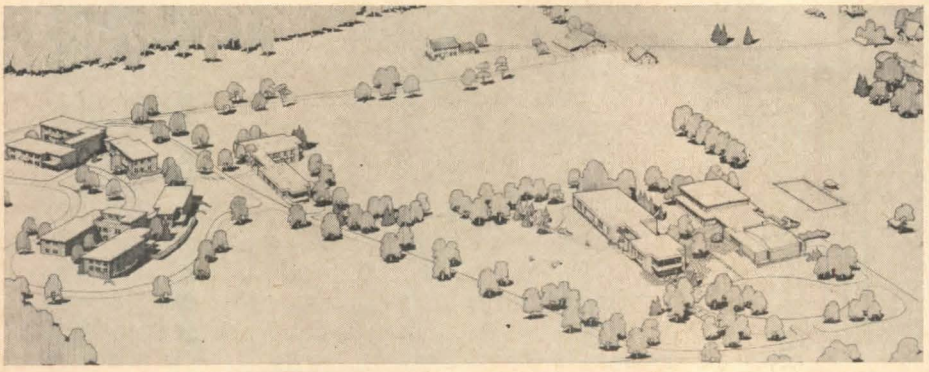


the structure's floor as much as 9′ above ground level. This will facilitate servicing and maintenance of labs, and will allow flexibility for changing laboratory needs. White tapered concrete columns will surround the building and will be interrupted only by a modified wedge-shaped auditorium of white concrete near the main entrance. All white concrete surfaces will be bush-hammered. To enhance finish of concrete, wood framework will be exposed. Flat roof, which cantilevers from all four sides of rectangular structure, will have two square openings near the center to enclose twin courts.



Four Elements Mark County Center

The Maricopa County governmental complex proposed for downtown Phoenix, Arizona, will be distinguished by four vertical elements rising from a common raised plaza. These will house the superior court, administrative offices, sheriff's office and jail, and supervisors' auditorium. Designed by Stephens, Walsh, Emmons & Shanks of Phoenix, the project will occupy two blocks, with the center street being closed off to unify the site. Parking and service areas serving the entire complex will be located beneath the plaza. Walls of the raised plaza and auditorium will be stone; of the other buildings, precast concrete. Completion is expected next year.



Boarding School in Brick

Plans for the Lakeside School, Spring Valley, N. Y., are by Sherwood, Mills & Smith. Two academic buildings, an infirmary with nurses' suites, and a residential building will be placed on a 155-acre site. All will be steel frame and exterior brick with concrete slab floors. Year-round education for the school's 125 neglected children is provided by the Edwin Gould Foundation. Consultants are Mechanical-Electrical-Heating-Ventilating Engineers, Smith & Hess, of Westport, Conn.; Structural Engineers, Fromme & Vosganian, New York; and Landscape Architect, Jack Staunton.





Parking over Shows

Multipurpose prestressed concrete structure is planned by the City of San Diego as part of its Center City Concourse. The main visual element—a 10-story, 200-ft square—is for parking. Underneath, and partially below level, is a terrace-roofed exhibition hall connected at one end to a convention hall. Sculptured ramps run parallel to the lower walls, carrying cars to the tower's continuously sloping parking floors or to its 90′ spiral express ramp at the core. The sculptured tower screen is designed to harmonize with nearby buildings. Architects and engineers are Tucker, Sadler and Bennett.

Drawings by White

The Davis Gallery in New York recently mounted an exhibition of drawings and watercolors by architect

BUILDING PRODUCTS NEWS from Dow Corning

The mellow charm of brick



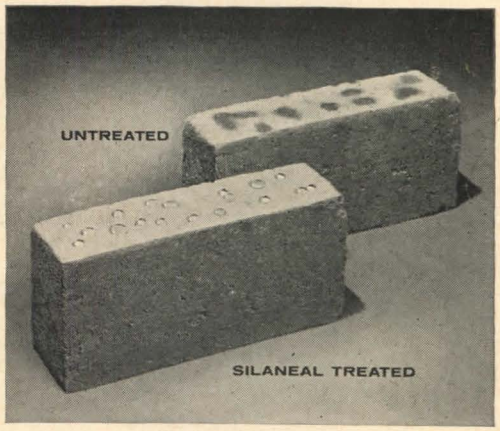
Carroll Hall, Bennett College, Millbrook, New York.
Brown, Lawford & Forbes — Architects

Silaneal® protects it from dirt, efflorescence, leakage

Brick — for texture and richness — was the architect's choice for this dormitory. Set among the warm tones of Bennett College, Carroll Hall's antique white brick enriches the campus complex. Specification of brick factory-treated with Silaneal assures lasting protection against unsightly discoloration from water-borne dirt . . . efflorescence . . . leakage.

Keeps Brick Clean Many brick, particularly light and pastel shades, have high suction rates and offer little resistance to water penetration. Water carries dirt *into* the brick, causing discoloration; water leaches soluble salts *out* of the brick, causing efflorescence. Factory-applied Silaneal makes brick water repellent so dirt stays on the *outside*, where it's easily washed away by rain, and efflorescence due to water leaching is minimized.

Controls Water Absorption High suction brick absorb water from fresh mortar so rapidly that improper hydration and mortar shrinkage may occur. As a result of poor bond between brick and mortar, hairline cracks may develop to allow leakage. But Silaneal *controls* water absorption; proper hydration of mortar is assured for maximum bond, less leakage.

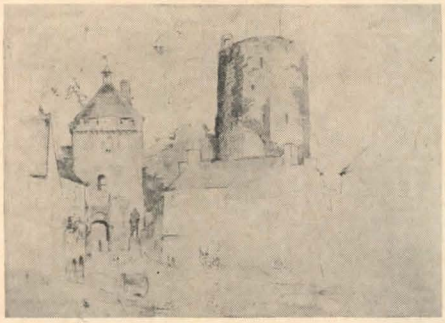


Proven By Tests Hundreds of transverse pressure tests — and tests simulating wind-driven rain — have demonstrated that wall sections built of Silaneal-treated high suction brick prove stronger and resist leakage better than similar untreated brick.

For brochure and list of sources, address your letterhead to Dept. 8719, Chemical Products Division, Dow Corning Corporation, Midland, Michigan.

Dow Corning

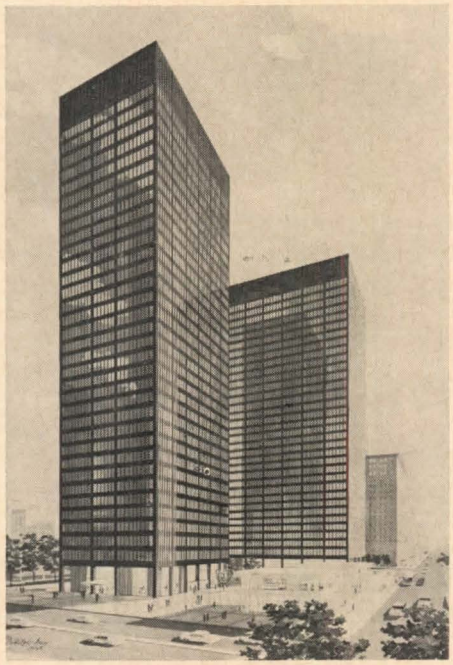




Stanford White. Predominately studies of the New England countryside and impressions from White's travels in Europe, the show was an enjoyable reminder of a day when most architects possessed a graphic facility in various media, and used it for fun as well as profit.

Twin Towers for Philadelphia

Integral to the Philadelphia scheme will be Continental Square by architects Milton Schwartz Associates and consulting architects Skidmore, Owings & Merrill. Twin 33-story towers of 60 per cent solar glass and muted-black structural members will rise at right angles from a lighter colored plaza at 15th and Market Streets. Glossy-black mullions beginning at the second story will delineate the buildings' height. The landscaped plaza extending over half the site toward West Plaza of City Hall will contain sculpture and art plus a low exhibition building. Within the full-use-on-rainy-days concept will be a ground-floor, all-glass commercial area that includes restaurant and bank. A below-level pedestrian concourse to City Hall and to commuter services will also provide space for shops and public exhibits. On still lower levels will be a 1143-space self-parking garage. Office floors will contain 43′ clear spaces that run the length of the building, and a service core.





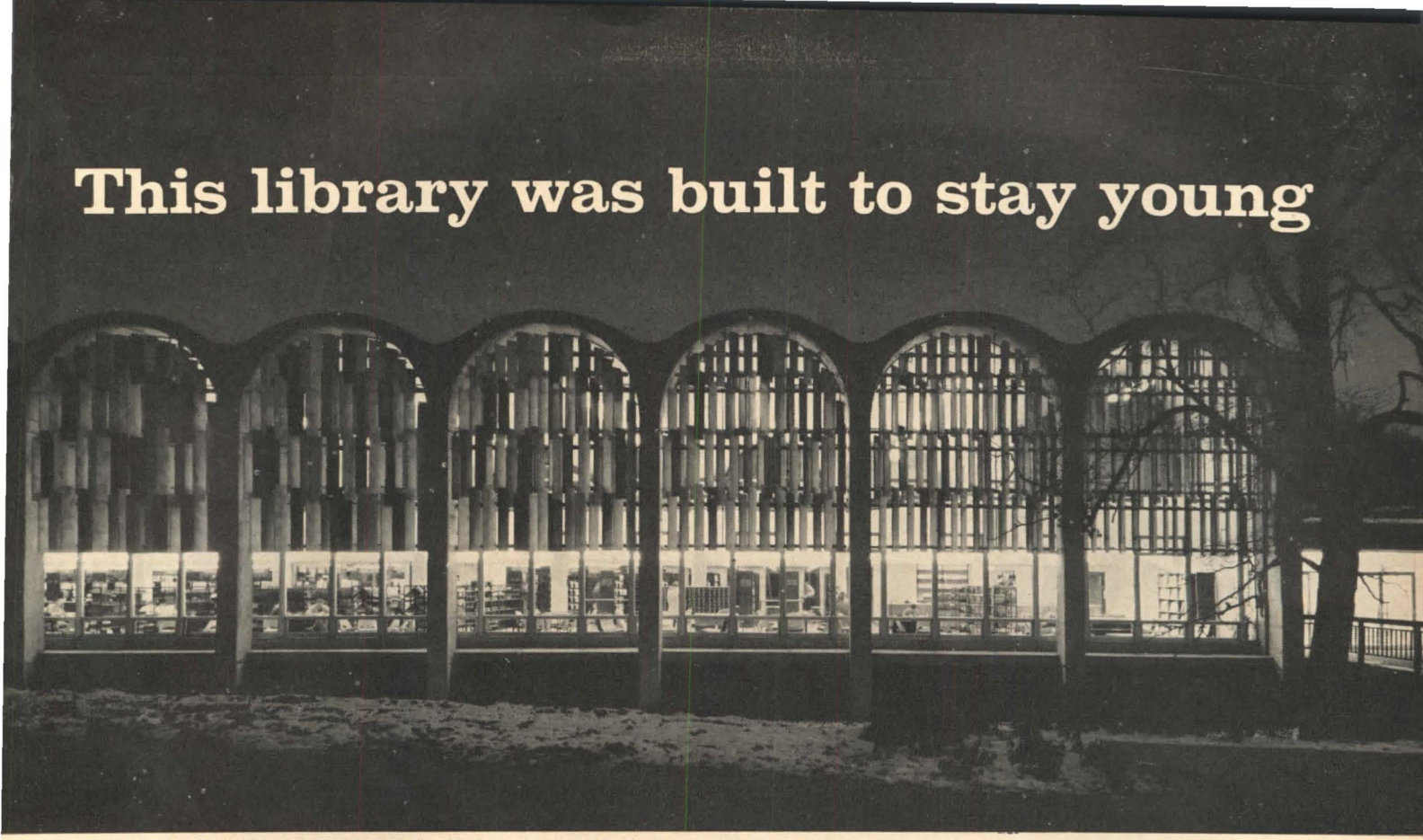
Son et Lumière Show by GE

General Electric is celebrating the 50th year of its Nela Park facilities and Lamp Division with a *Son et Lumière* display on the grounds of its Cleveland campus. The show will run through the early fall and is expected to attract thousands of visitors. Lighting, of course, is the star, and creates a variety of moods as spectators walk through the grounds seeing and hearing the story of man-made illumination. More than 8500 lamps are used.

PERSONALITIES

LOUIS I. KAHN was made an honorary member of the American Institute of Interior Designers at its 32nd Annual National Conference, Philadelphia, on May 29; A.I.D. lauded Kahn's influence on our midcentury environment . . . Midtown Plaza in ROCHESTER, N.Y., has won that city the 1962 Ward Melville Gold Medal for Community Improvement . . . Newly appointed dean of the University of Cincinnati's College of Design, Architecture, and Art is HAROLD R. RICE . . . ROBERT NEWMAN of Bolt, Beranek & Newman, acoustical consultants for Lincoln Center, has received an honorary doctorate from Lawrence College, Wisconsin . . . CHARLES LUCKMAN is new Chairman of the Board of Trustees of the California State Colleges; his firm, CHARLES LUCKMAN ASSOCIATES, will oe master planners and co-ordinating architects for the 1967–68 California World's Fair in Long Beach . . . At its 63rd Annual Architects' Convention, June 13–15, the New Jersey Society of Architects honored SHERLEY W. MORGAN (Morgan is Dean Emeritus of Princeton University); U.S. Senator HARRISON A. WILLIAMS received an award for his constant support and sponsorship of better architecture and planning . . . New President of the New Jersey Society of Architects and the New Jersey Chapter of AIA is ARTHUR RIGOLO . . . PAUL A. THIRY, Seattle, will serve on the National Capital Planning Commission; Thiry has been chairman of AIA's Committee on the National Capital since 1960 . . . ROBERT ALLAN JACOBS has been re-elected president of The Architectural League of N.Y.

This library was built to stay young



SPRAIN BROOK BRANCH, YONKERS PUBLIC LIBRARY, Yonkers, N. Y.; Barrel vaulted concrete roof contributes architectural grace and column-free interior space. Architect: ELI RABINEAU, Yonkers; Structural Consultant: LEV ZETLIN, New York; General Contractor: CHIAPPINELLI-MARX, INC., Mt. Kisco; Ready-mixed Concrete: PLAZA CONCRETE CORP., Yonkers.

The combination of classic design and modern reinforced concrete presents interesting possibilities for dynamic new approaches to the problems of form and function, beauty and durability. Consider, for example, the new Sprain Brook Branch Library in Yonkers, N. Y.

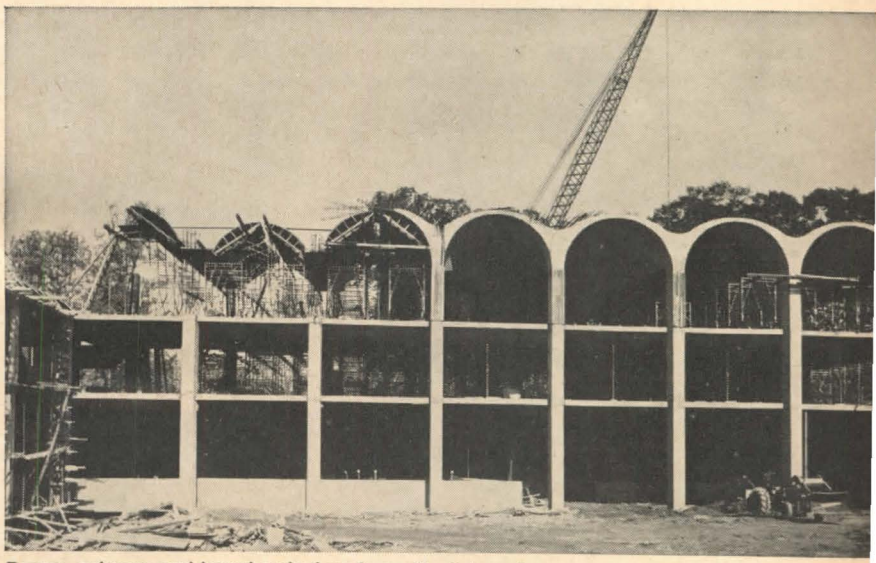
By using reinforced concrete, the architect had the advantage of freedom of design. Columns and pillars were proportioned to express a feeling of permanence and dignity. Concrete exterior columns and inside slabs were left exposed, so that structural members were visually integrated into the overall design. The result: a strong impression of unity.

Among the forward-looking features of the library are an outdoor reading area, a 100-car parking lot unobtrusively built into the multi-level landscape, and a community activity center.

In keeping with the timeless quality of the design and construction, Lone Star Portland Cement was used exclusively.

LONE STAR CEMENT CORPORATION, NEW YORK 17, N.Y.

LONE STAR PORTLAND CEMENT



Beams, columns and barrel-arched roof are all reinforced concrete, cast in place.

South wing includes the children's reading room. The open area under this wing is available for "Story Hours."



"SET ASIDES" AND ARCHITECTS



by E. E. Halmos, Jr.

The Small Business Administration—that ubiquitous Government agency which has long antagonized manufacturers and construction contractors, among others — moved into the architectural field recently. A result could be a serious upset in long-standing procedures by which architect-engineers obtain their work.

If you haven't run into it before, SBA operates under a mandate of Congress to see to it that small operators (generally firms with less than 500 employees, or construction contractors who do a gross business of less than $5 million a year) get a fair break in bidding on Government work. This is done by "set asides"—not permitting larger firms to bid at all on certain phases of work, or on contracts of certain sizes.

Until a few weeks ago, there had never been a "set aside" on architect-engineer contracts: the armed services, for example, have followed the lead of AIA and engineering professional groups, and feel that negotiations for professional services are outside the area of bidding anyway.

Some weeks ago, however, a major West Coast architect-engineer firm made inquiries at the U.S. Forest Service concerning plans for a laboratory for water resources and fire investigations that is to be built at San Dimas, California. The Regional Forester told the inquirer that the contract had been ordered "set aside" for "small business" by SBA's regional offices, and that since it was a large firm, it wouldn't be considered.

Checks with California Congressmen (and by P/A's Washington staff) showed this to be correct, though SBA's headquarters professed to have no knowledge of the action. Fact that there is no immediate definition of what constitutes a "small business" in the A-E field didn't seem to bother anyone.

The Forest Service, which is somewhat of an innocent bystander in the matter, said in Washington that it also had no knowledge of the action until final contract negotiations had been started; and it said it would have lifted the set-aside if successful negotiations had proved impossible with firms already selected.

What's disturbing, of course, is SBA's apparent assumption that it can arbitrarily differentiate between A-E firms on a basis of size or gross business. This same point has long bothered the powerful Associated General Contractors and the AFL-CIO's Building Trades Department, which have been battling to get SBA out of the construction business altogether.

They argue that such arbitrary rulings don't guarantee the best job at the lowest price, and often constitute direct interference with engineering and architectural judgement as to who is best qualified to do a job.

Getting Off the Ground

The Federal Aviation Agency will push again on its program to speed ground-travel to and from airports. Fact is that such a study—and some actual improvement—is almost a requirement before Congress will look too kindly on added spending for airport construction.

FAA Administrator Halaby, appearing before the House Commerce Committee, took the bit in his teeth with a statement that the traveling public may find air travel speed "an illusion" unless ground-time is improved. His answer: co-ordinate highway programs with airport development.

Accident Rates

Alarmed by an accident rate that has consistently pushed construction into the "most hazardous" insurance class, the Associated General Contractors will make yet another try to bring the rate down to lower levels.

Objective is modest: to reduce the current rate of 30 disabling injuries per million man-hours to 20 in the first year. Eventual hope is to bring the rate down to the 5 per million hours, which has been established on Corps of Engineers jobs (where safety regulations are made part of contract requirements).

AGC try for the reduction through educational programs, issuance of manuals and suggested procedures, and awards to firms showing reductions.

New BRAB Study

The Building Research Advisory Board will make a new study of adhesive-bonded structural components for the Federal Housing Administration.

Key purpose of the study will be to determine means for evaluating potential performance of structural components—independent of materials composition or configuration—for residential construction. At the moment, there are no criteria by which the potential performance can be evaluated, and products in use are thus controlled only by standards of manufacture developed by the industry.

BRAB is now forming a special advisory committee to conduct the study.

FINANCIAL

As June began, there were only two clouds on the horizon of what seemed to be a good business season for the construction industry: the round of new labor negotiations already opening up; and the possible effect of rising materials prices, such as steel. Neither cloud had moved close enough, as the summer got under way, to allow a thorough assessment of its effects.

On labor, contractor officials were hesitant to make official predictions. Privately, however, they thought new wage settlements would center at about 10 or 11 cents an hour, over a two-year period—a rate they didn't think would be excessive, or would have too much effect on their bid calculations.

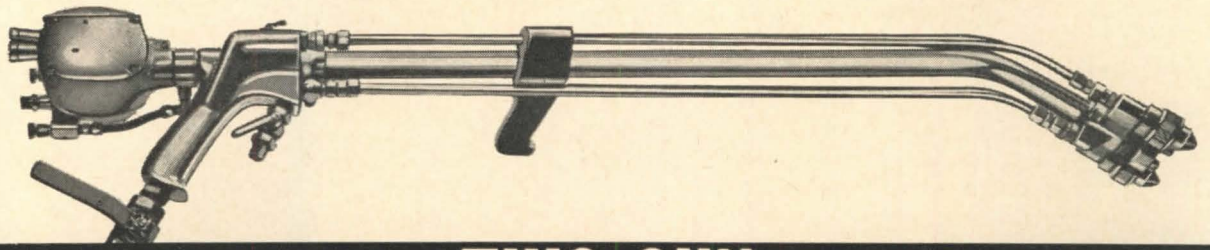
On materials prices, the effect of the recent steel price boosts was difficult to judge: The price rises have been "selective"—that is, applied to special products and categories—and not too many of them affect construction broadly enough, right now, to have had much effect for awhile.

Other indicators showed a continuing business improvement: Value of new contruction put in place in April was set at $4.8 billion by the Census Bureau—up 10 per cent from March and up 4 per cent over April, 1962.

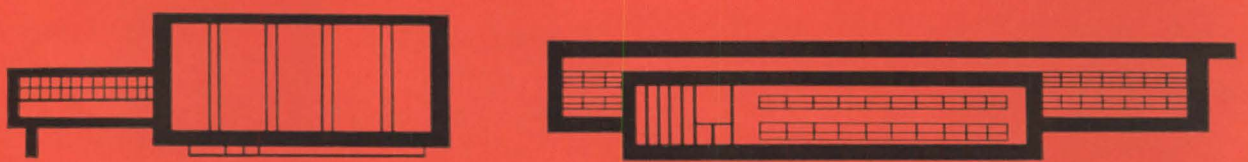
For the first four months of 1963, Census Bureau figures showed that total new construction spending amounted to $17.5 billion, compared to $16.6 billion a year ago.

A large part of the power behind the steady business improvement was coming from the housing field, where the seasonally adjusted rate was set at 1.63 million units in April, compared to 1.54 million in 1962. In April alone, construction was begun on a total of 155,000 housing units (private), compared to 123,000 that were reported begun in March.

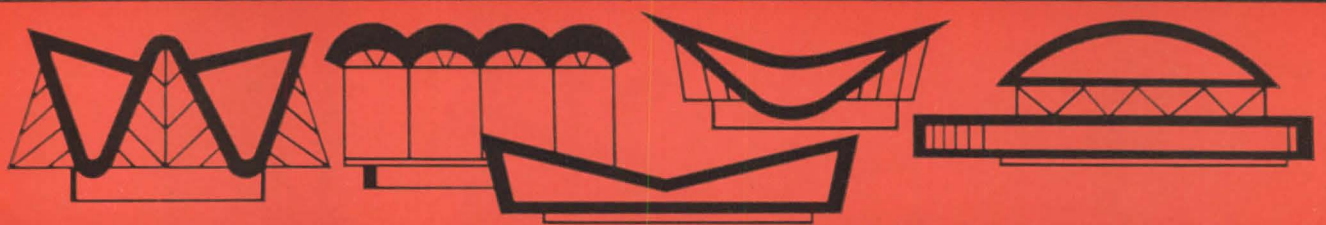
Another factor behind the continuing strength of the industry was public acceptance of bond issues that finance construction work.



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LO-TONE® ACOUSTICAL CEILINGS



Moses, by Michelangelo. Marble, height about 7 1/2 feet. (San Pietro in Vincoli, Rome.)

BEAUTY THAT ENDURES

. . . in a complete line of Lo-Tone ceiling tile and board for nearly any installation.

If you need an attractive Fire-Rated tile or board, for example, there's a Lo-Tone product to fill the bill. Not one pattern, but three — including the new Fissura pattern with the classic beauty of travertine marble. All Lo-Tone FR products are completely fabricated under Underwriters' Laboratories Inc. (U.L.) inspection and carry the Label Service.

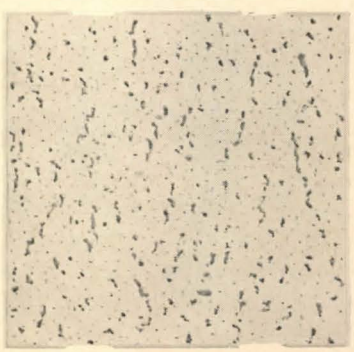
For the architect who wants to design ceilings to match throughout a building, including kitchens and washrooms where washability is a concern, Lo-Tone vinyl-coated products are ideal. The coated plastic surface is sealed and static-free so that it will not attract dirt particles.

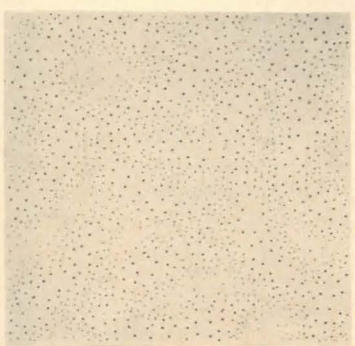
For effective air distribution, acoustical control, and decorative finish, nothing does the job so handsomely as Lo-Tone Acoustical Ventilating products. This dramatic new approach to room air distribution has special appeal to the architect who welcomes the chance to design ceiling areas unobstructed by conventional air distribution devices.

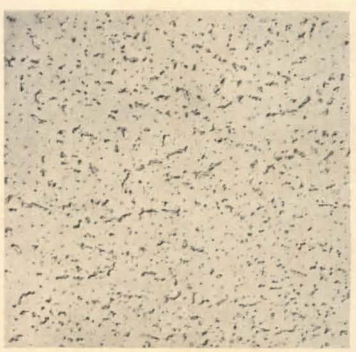
Almost unlimited effects in striking ceiling textures are possible through the use of Lo-Tone Design Tiles. These sculptured tiles may be used alone, or in conjunction with other handsome Lo-Tone patterns. Corporate trademarks and symbols can also be designed to further personalize a special ceiling area.

Whatever your requirements, see your local Lo-Tone Acoustical Contractor. Consult your Yellow Pages, or write direct to: Wood Conversion Co., St. Paul 1, Minnesota.

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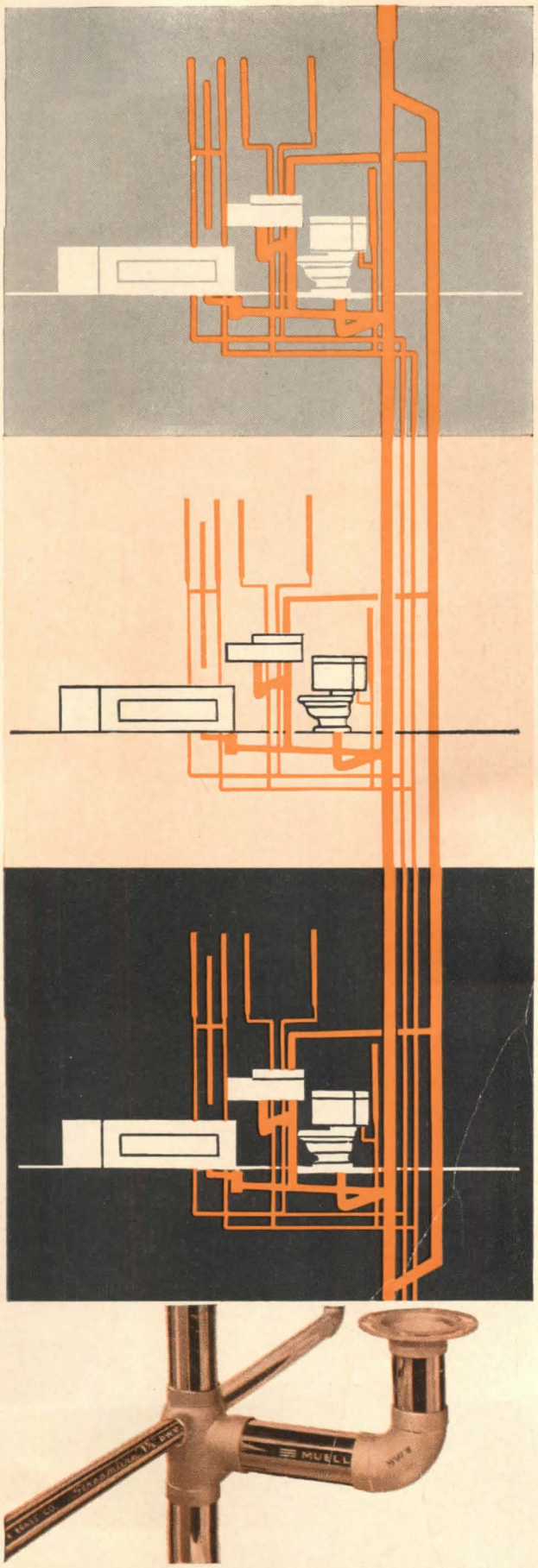

Acoustical Ventilating Products


Vinyl-Coated Acoustical Products

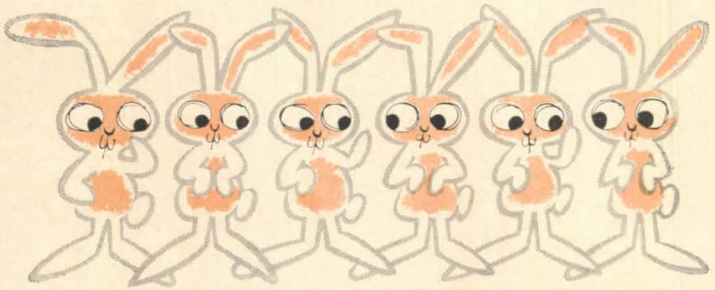

Fire-Rated Acoustical Products


Design Tiles

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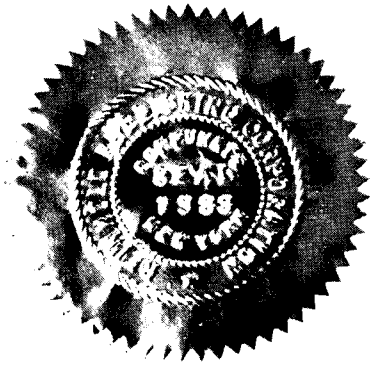
For complete information on Streamline copper tube and the full line of standard and special (DWV) fittings, send for Catalog S-361.



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ANNUAL P/A DESIGN AWARDS PROGRAM

for projects not yet built

PROGRESSIVE ARCHITECTURE announces the eleventh annual Design Awards Program. Awards will be made to architects and their clients for projects now in the design stage to be built in 1964 in the United States.

PURPOSE of the Design Awards Program is to give recognition to good design in the period of design development, rather than after completion, in order to encourage the designers and owners of the projects so honored.

AWARDS and **CITATIONS** will be given by the Jury listed below to the best projects chosen from nine categories—COMMERCE, EDUCATION, DEFENSE, HEALTH, INDUSTRY, PUBLIC USE, RECREATION, RESIDENTIAL DESIGN, RELIGION—on the basis of site use, choice of structural system and materials and methods of construction, solution of the client's program, and over-all design excellence.

The Jury will assign projects to the various categories, and reserves the right to withhold an Award or Citation in any category.

FIRST DESIGN AWARD may be given to the one best building submitted.

FIRST DESIGN AWARD, AWARDS, AND CITATIONS may also be given in Planning and Urban Design. Under this phase of the program, the Jury will consider projects in Urban Redevelopment, Campus Planning, Industrial Park Planning, Recreational Area Planning, etc.

JURY will be composed of: Architect VINCENT G. KLING (Philadelphia, Pa.) Architect ERNEST J. KUMP (Palo Alto, Calif.); Architect HARRY WEESE (Chicago, Ill.); Engineer WILLIAM J. LE MESSURIER (Boston, Mass.); Architectural Critic and Historian PETER COLLINS (McGill University, Montreal, Canada).

JUDGMENT will take place in New York during September 1963. Winners of Awards and Citations will be notified (confidentially) immediately after the judgment.

ANNOUNCEMENT of the winning projects will be made at a presentation in the home town (if practicable) of the recipient of the First Design Award. Winning projects will be featured in January 1964 P/A. As in the past, P/A will arrange coverage of winning projects in news media, particularly those in the localities of all the Award and Citation winners.

DEADLINE FOR MAILING is August 31, 1963. No application blanks are necessary. For each project you submit, simply send:

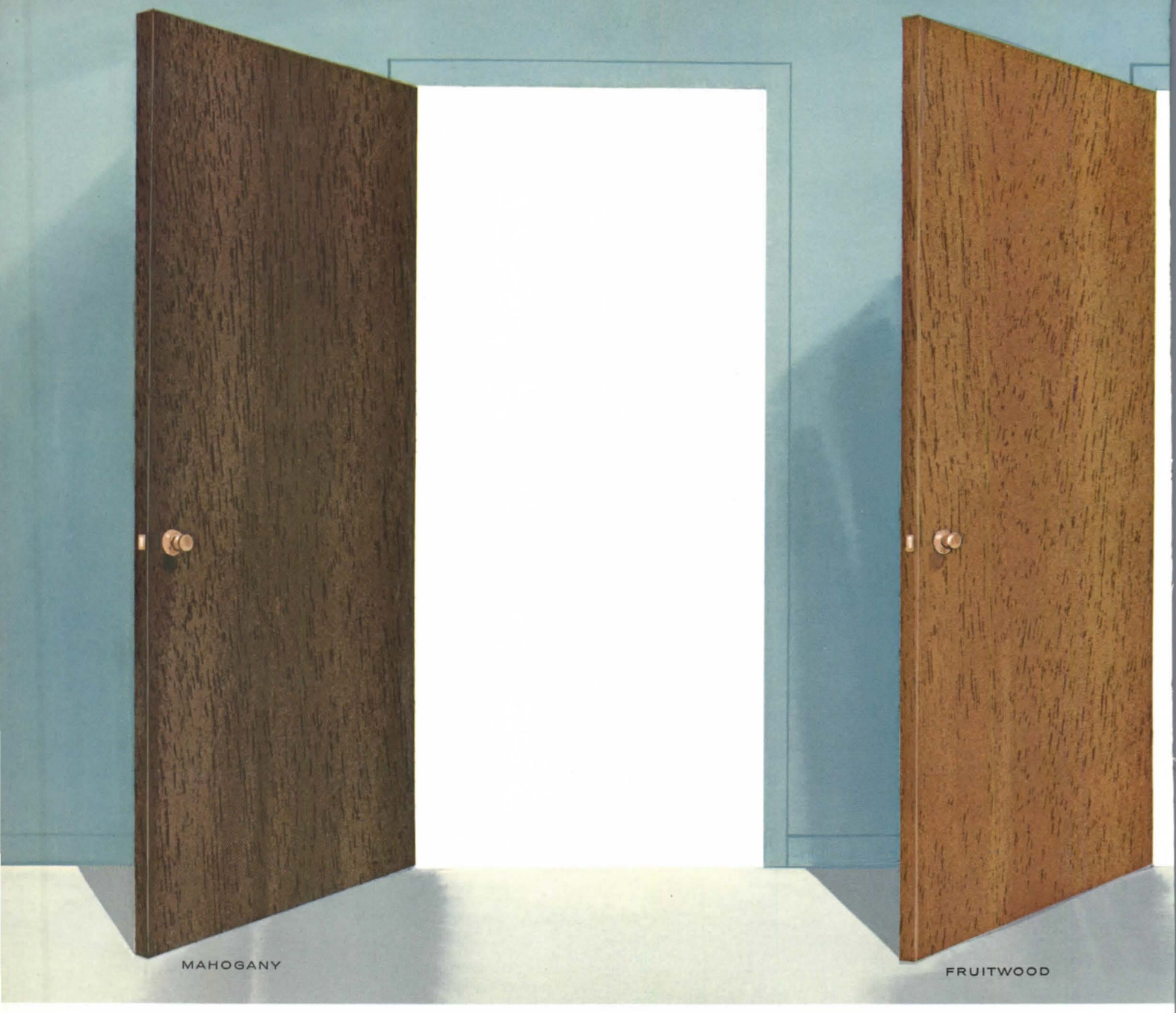
1. Client's name, location, and proper name for project.
2. Brief explanation of the program and your solution.
3. Description of materials and construction methods used, and the reasons for their use.
4. Site plan; basic building plans; pertinent sections and details.
5. Perspectives or model photographs. It is preferred that you submit 8" x 10" prints, photostats, or photographs. **Original drawings, actual models, or mounted exhibit panels will not be accepted.**
6. A statement that (a) the project is now in the design stage and that construction is anticipated in 1964, and (b) that submission of a project for judgment gives PROGRESSIVE ARCHITECTURE first rights in the architectural field to publish both the project and the finished building if it receives an Award or Citation.

ADDRESS on or before August 31, 1963 to:
Awards Editor, PROGRESSIVE ARCHITECTURE
430 Park Avenue, New York 22, New York

P/A will guard and return all material that is submitted.

For more information, circle No. 316 ➤

FOR OFFICES, HOTELS, MOTELS, APARTMENTS, SCHOOLS,



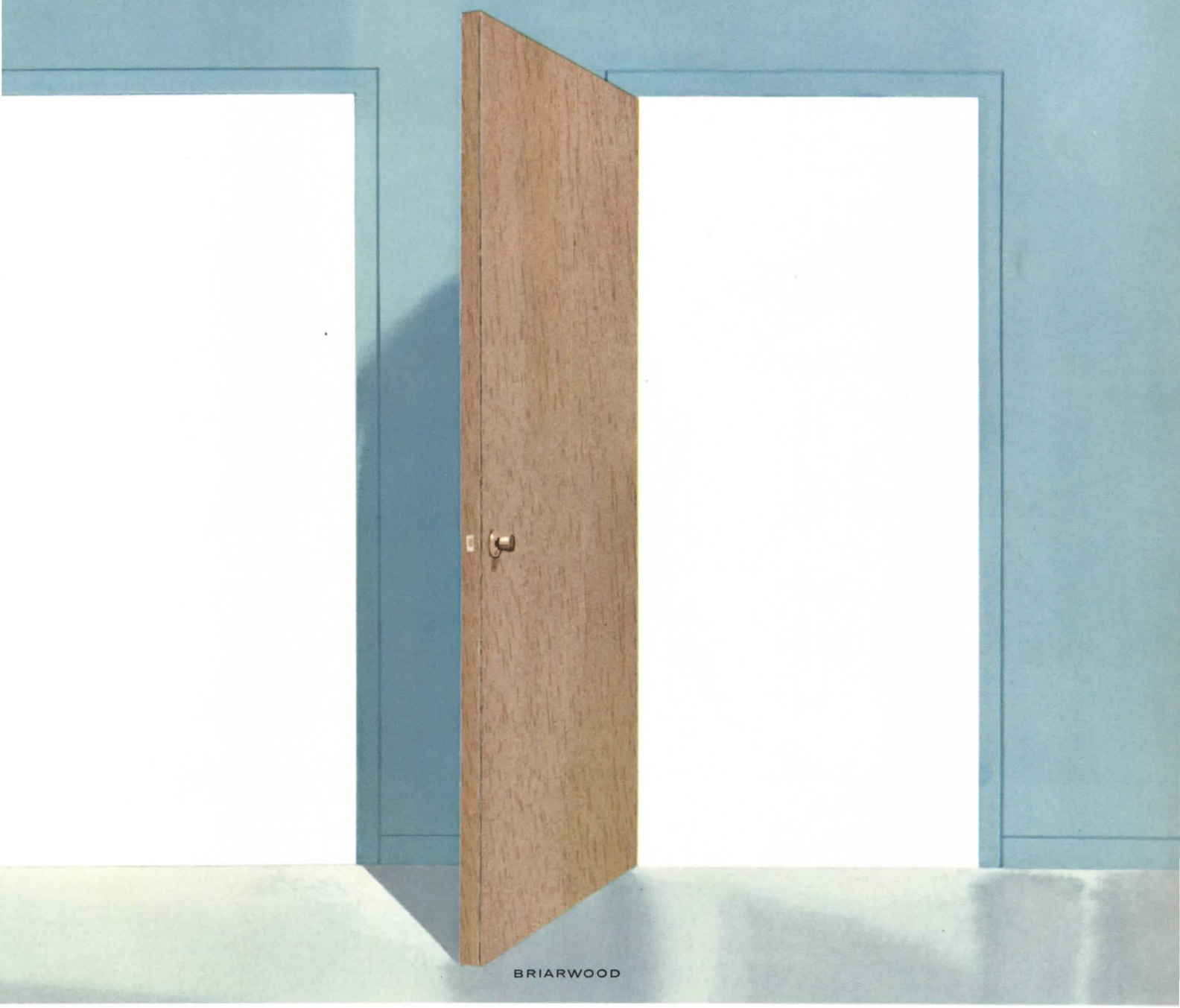
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Vinyl-clad doors lead Ceco's new Décor line. Others include (1) Colorstyle doors in six vinyl-base baked-on enamel colors (flat or embossed steel), and (2) Stainless steel doors in satin or striated finishes. Custom-quality hardware is used on Décor doors.

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Send me your full color catalog entitled "Décor Steel Doors," presenting Vinyl-clad, Colorstyle and Stainless lines. ☐

We are interested in considering ☐ Vinyl-clad ☐ Colorstyle

☐ Stainless doors for the following project:_____

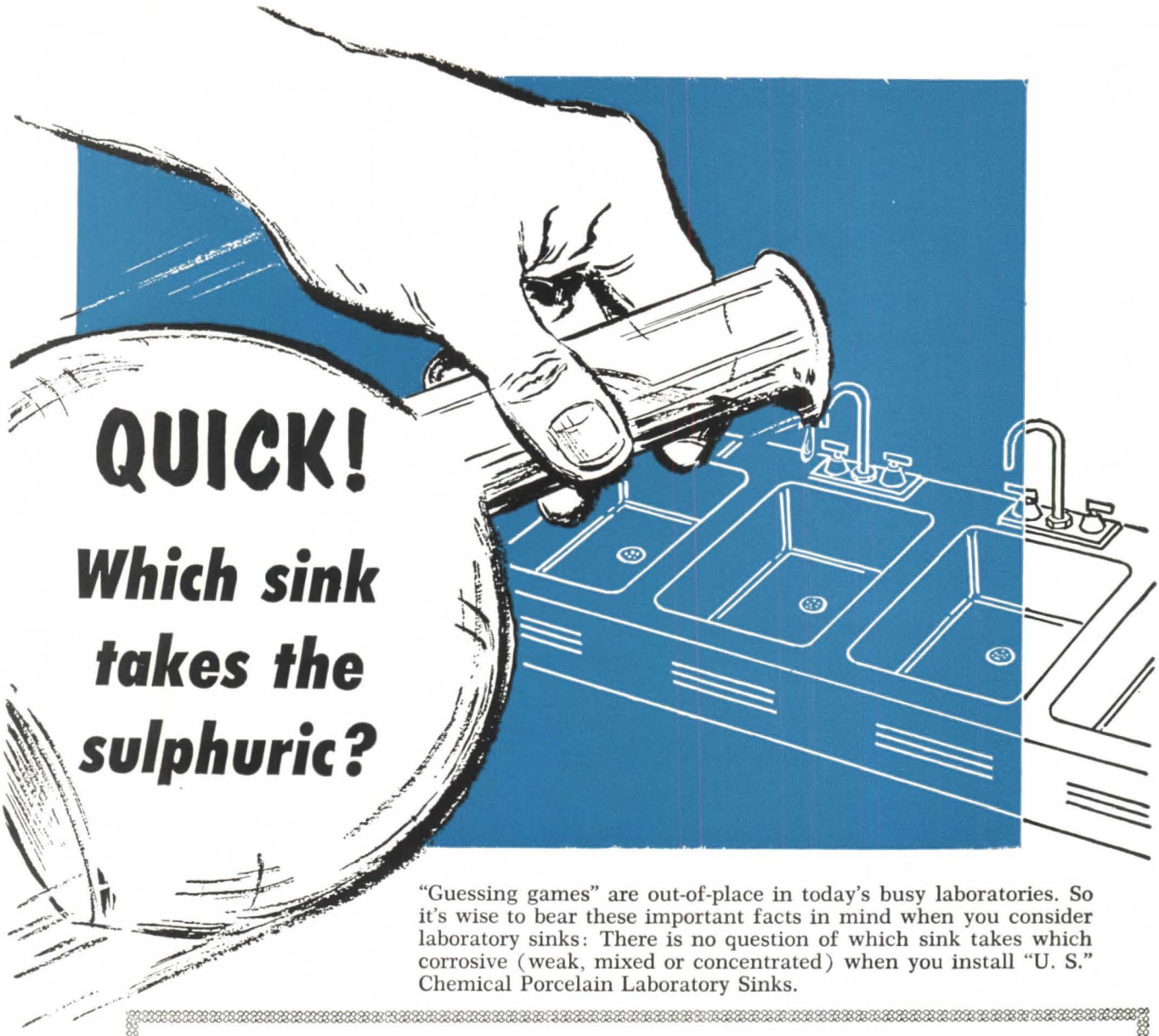
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Name_____ Title_____

Firm_____

Address_____

City_____ Zone_____ State_____



QUICK! Which sink takes the sulphuric?

"Guessing games" are out-of-place in today's busy laboratories. So it's wise to bear these important facts in mind when you consider laboratory sinks: There is no question of which sink takes which corrosive (weak, mixed or concentrated) when you install "U. S." Chemical Porcelain Laboratory Sinks.

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The laboratory sinks which we manufacture from chemical porcelain are completely impervious and corrosion-proof. Their resistance to all corrosive agents (except hydrofluoric acid) is not limited to the glazed surfaces. Both the glaze, and the sink body itself, are made of the same basic corrosion-proof materials. Thus, there is practically no difference between the corrosion resistance of the glaze and that of the sink body.

We, therefore, make the following guarantee:

We guarantee, for the life of the building in which it is installed, that this sink will not be destroyed by the action of corrosive agents, regardless of whether glazed or unglazed surfaces are exposed to corrosion.

We also guarantee that this sink will not be damaged or destroyed by temperature changes or mechanical stresses encountered in normal laboratory usage.

(This guarantee does not include mechanical damage due to gross carelessness during installation or due to heavy impact, nor does it include etching of the sink surface by hydrofluoric acid. Natural and artificial silicates are attacked by hydrofluoric acid, and if such acid is emptied into sinks, the sinks should be flushed with water immediately to prevent damage to the glaze.)

Under the terms of this guarantee we will furnish without charge, freight prepaid, a new sink for any sink which fails to meet the service warranty above. This guarantee does not include any installation costs. We reserve the right to request the return of the defective sink, freight collect.

319-H-3

CHEMICAL CERAMICS DIVISION

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For more information, turn to Reader Service card, circle No. 371

NEW PRODUCTS

One-part silicone synthetic-rubber sealant resists attack by temperature extremes, ozone, and sunlight. Silicone outlasts other types of elastomeric sealants by as much as 2 to 1; it does not harden or lose flexibility with age. It flows easily at sub-zero temperature or 120 F and can be applied at any temperature in which a man can work. Nontoxic sealant is available in five basic tints, including translucent, and can be made in custom hues to match any building color scheme. Pigments used in sealants are permanent and will not fade. Silicone resists conditions of elongation, compression, shear, and slow cycle fatigue; can be used with any light-colored masonry including marble, concrete, limestone, granite, sandstone, etc. Sealant is ready to use, directly from the cartridge, requiring no mixing with a catalyst or accelerators. It is solvent-free and cures with minimum shrinkage by chemical action initiated by contact with moisture in the air rather than by the evaporation of solvents. "Come-back" after high-temperature compression of silicone rubber greatly exceeds that of any other elastomer. Also includes a 5-year warranty. General Electric, Silicone Products Dept., Waterford, N.Y.

On Free Data Card, Circle **100**





Shamrock-colored, translucent, reinforced plastic panels have been employed as skylighting and sidelighting material for two public ice-skating arenas in West Quincy and Saugus, Mass. Glass-fiber reinforced panels, weighing 8 oz per sq ft, reduced labor costs and added to appearance of the building by eliminating excessive overlapping requirements. Because of reduction in overlap and same coefficient of expansion for both the aluminum and plastic panels, there is less chance for leakage. Panels are moisture, fire-, chemical-, and shatter-resistant. Panels are 22′ long and 35″ wide. Filon Corp., 333 N. Van Ness, Hawthorne, Calif.

On Free Data Card, Circle **101**

Handsome "Corium" wall and floor tiles are made from top-grain leather that has been "Farberized" (a patented process) to increase resistance to stains, abrasion, and indentation; other properties are resilience and noise reduction. A special leather adhesive has been prepared for installation, preventing curling. Tiles have microsanded edges to enable perfect alignment on installation. Standard sizes are 9″ x 4½″, 8″ x 4″, and 4½″ x 4″½; standard thickness is .080″ — thinner for walls if desired. Special sizes and designs can be obtained on order. Price of a floor of Corium tiles is comparable to that of a good parquet installation. Tiles warm to a deep, rich tone with age. Corium, L. Farber Co., 122 E. 42 St., New York 17, N. Y.

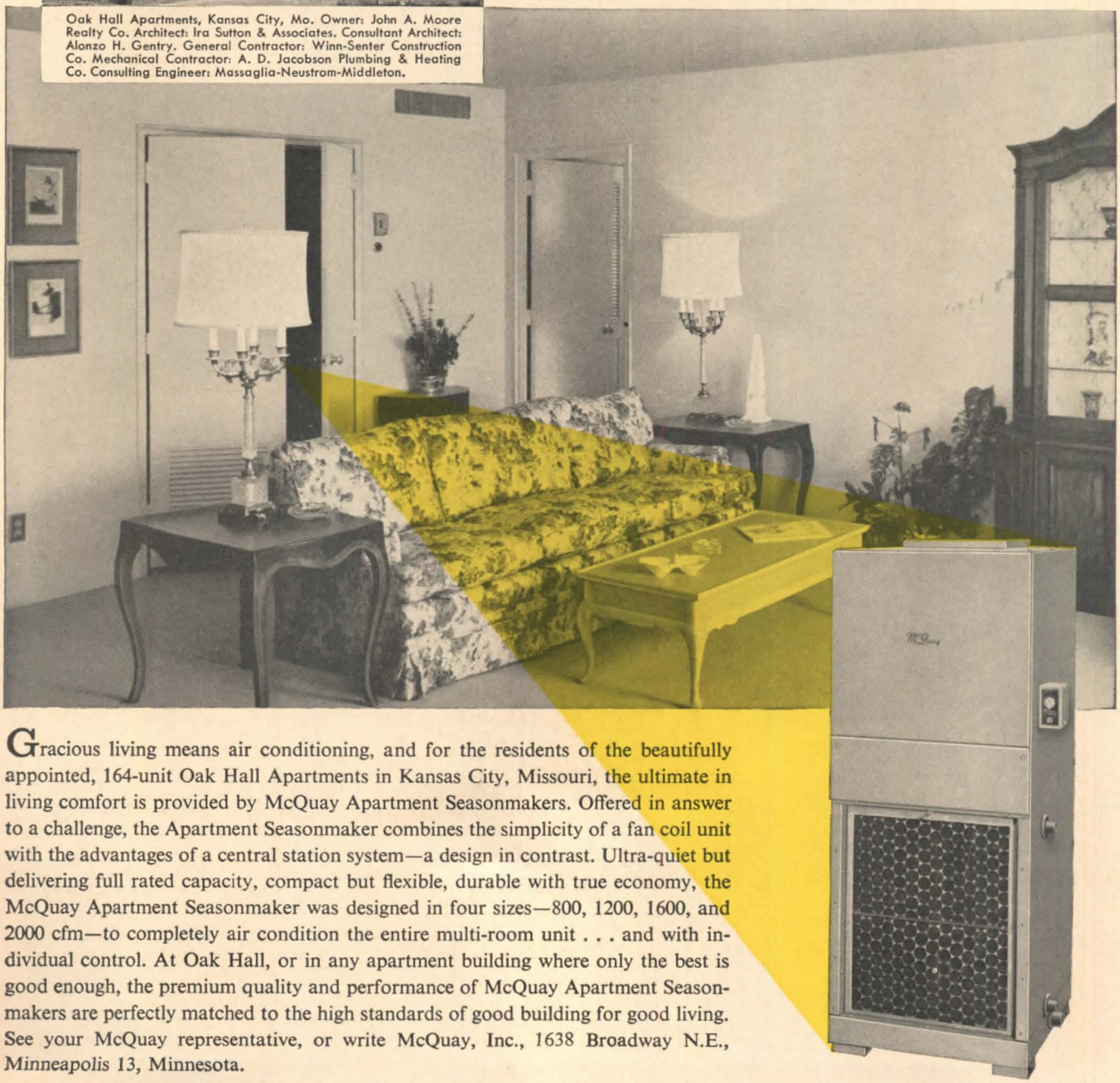
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Oak Hall Apartments, Kansas City, Mo. Owner: John A. Moore Realty Co. Architect: Ira Sutton & Associates. Consultant Architect: Alonzo H. Gentry. General Contractor: Winn-Senter Construction Co. Mechanical Contractor: A. D. Jacobson Plumbing & Heating Co. Consulting Engineer: Massaglia-Neustrom-Middleton.

air condition an entire multi-room unit with one APARTMENT® Seasonmaker



Gracious living means air conditioning, and for the residents of the beautifully appointed, 164-unit Oak Hall Apartments in Kansas City, Missouri, the ultimate in living comfort is provided by McQuay Apartment Seasonmakers. Offered in answer to a challenge, the Apartment Seasonmaker combines the simplicity of a fan coil unit with the advantages of a central station system—a design in contrast. Ultra-quiet but delivering full rated capacity, compact but flexible, durable with true economy, the McQuay Apartment Seasonmaker was designed in four sizes—800, 1200, 1600, and 2000 cfm—to completely air condition the entire multi-room unit . . . and with individual control. At Oak Hall, or in any apartment building where only the best is good enough, the premium quality and performance of McQuay Apartment Seasonmakers are perfectly matched to the high standards of good building for good living. See your McQuay representative, or write McQuay, Inc., 1638 Broadway N.E., Minneapolis 13, Minnesota.

The Apartment Seasonmaker is installed out of the way but in an easily accessible space of its own, as shown above.

McQuay INC. MEANS QUALITY

MAKE THE SEASONS COME TO YOU

AIR CONDITIONING • HEATING • REFRIGERATION

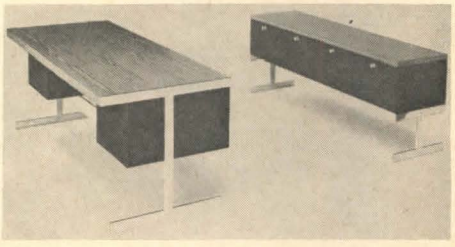
MANUFACTURING PLANTS AT FARIBAULT, MINNESOTA • GRENADA, MISSISSIPPI • VISALIA, CALIFORNIA

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Surfacing Includes Ground Marble

A surfacing material that is at the same time decorative, durable, and fireproof is now available for specification. It is "Marble-lite," a spray-on surfacing that incorporates ground marble for a hard, textured surface. The material is said to have excellent bonding qualities and abrasion resistance, is nontoxic, and is unaffected by alakalis in plaster, cement, or masonry. Other qualities include resistance to most acids and superior waterproofing qualities. It comes in 12 colors, and is appropriate for both exterior and interior use. Spraying must be by special equipment in accordance with the manufacturer's recommendations. Manufacturer guarantees all work performed under terms of his contract to be free from defects of any kind as to materials and workmanship for a period of five years from date of final acceptance. E. M. Fitzsimons & Associates, Inc., 89 Wolf's Lane, Pelham, N. Y.

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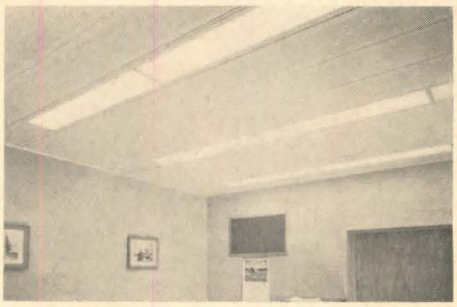
Elegant Steel Furniture

A slim, delicately proportioned, "I"-shaped leg of mirror-chrome steel, the keynote of the "Formal Line," supports all-steel case pieces with wood or plastic-laminate tops. Slim chrome stretchers provide rigidity. Single and double pedestal desks, storage cabinets, and tables can be used in a number of flexible combinations. Peerless Steel Equipment Co., Unruh and Hasbrook Avenues, Philadelphia 11, Pa.

On Free Data Card, Circle **104**

Air Ceiling System

Air ceiling system allows architects to provide heating and cooling systems without losing space by making functional use of the building structure itself. System utilizes structural deck cells as combined air runs and ceiling diffusers for conditioned air. Since the cells are an integral part of the floor or ceiling structure itself, there are savings both in space and the cost of auxiliary ductwork and diffusers. Future air conditioning can also be



built in at small cost. These cells are part of long-span steel cellular deck 6″ or 7½″ deep in cross section. High strength-weight ratio of steel deck eliminates intermediate supports when used in roof construction and provides a surface for support of insulation and roofing. Because the system diffuses heat from a large area across the ceiling, it creates comfortable, draft-free environment that is difficult to achieve with conventional systems. The R. C. Mahon Co., P. O. Box 4666, Detroit 34, Mich.

On Free Data Card, Circle **105**

Up-dated Lace Curtain

Danish architect Verner Panton's "Geometry I" pattern has been translated into an all-white casement fabric 88″ wide. Called "Bobinette," this



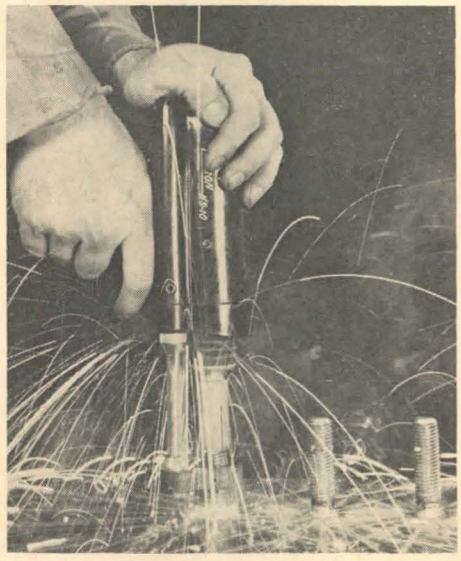
drapery cloth co-ordinates with printed fabrics and rugs with the same pattern. All these materials are produced in Copenhagen by Unika-Vaev and are available, together with a wide range of other dramatic fabrics, at the firm's New York showroom. Unika-Vaev, 305 E. 63 St., New York 21, N.Y.

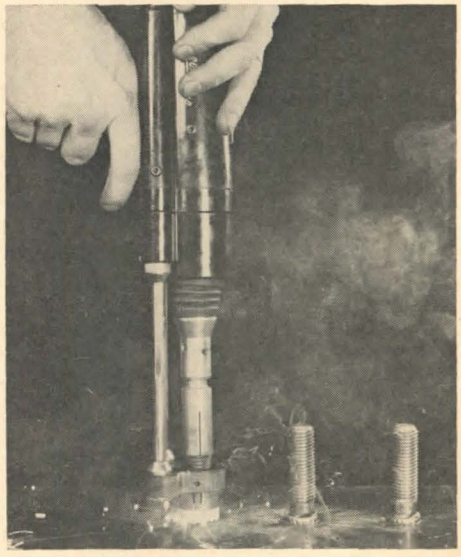
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Steel Tension Units

Steel solid-bar tensioning units offer choice of no-slip anchorages to meet wide range of specific engineering needs. Wedge anchor will grip at any point on bar, thereby adapting itself to minor variations in length of girder. After tensioning, bar may be cut almost flush with end plate, which eliminates expensive forming or recessing. Bars are less affected by corrosion than tendons composed of multiple wires. Because bar is rigid, it becomes an ideal tensioning unit for vertical prestressing. Steel stress units are used in foundations, precast and cast-in-place buildings, bridges, and trusses. Stressteel Corp., 221 Conyngham Ave., Wilkes-Barre, Pa.

On Free Data Card, Circle **107**



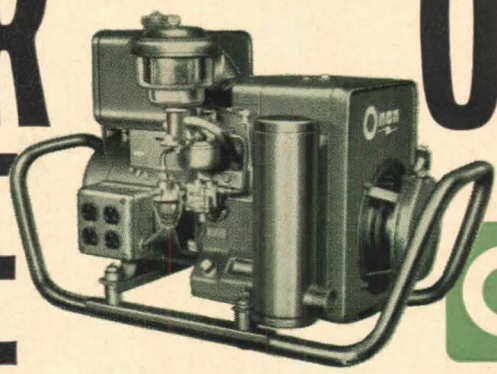


Weld Splatter Removed

Attachment to welding guns or semi-automatic end-welding equipment provides slow, controlled lowering of well studs into pool of molten metal formed during welding cycle. As a result, splatter of weld metals is eliminated so that fillet formation and weld quality can be precisely controlled. Control mechanism is enclosed in 2″ plastic section above bellows of welding gun. Before use of "Tranquil-Arc" (*top*); using Tranquil-Arc (*below*). Nelson Stud Welding Div., Gregory Industries, Inc., Lorain, Ohio.

On Free Data Card, Circle **108**

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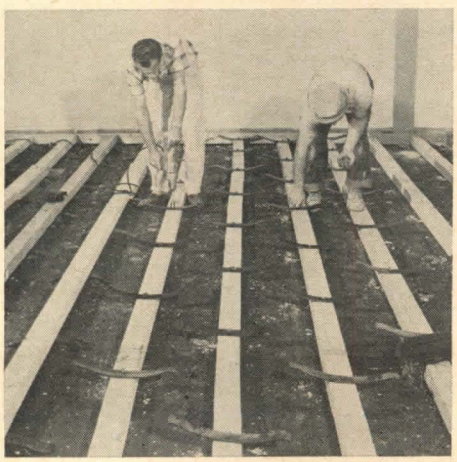
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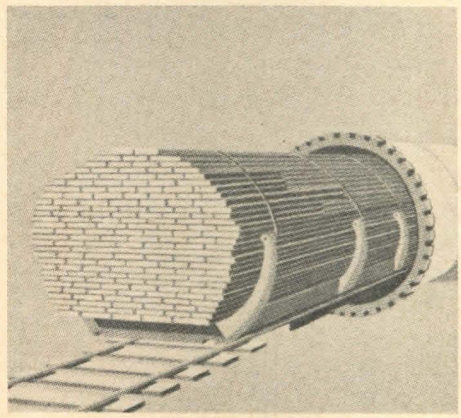
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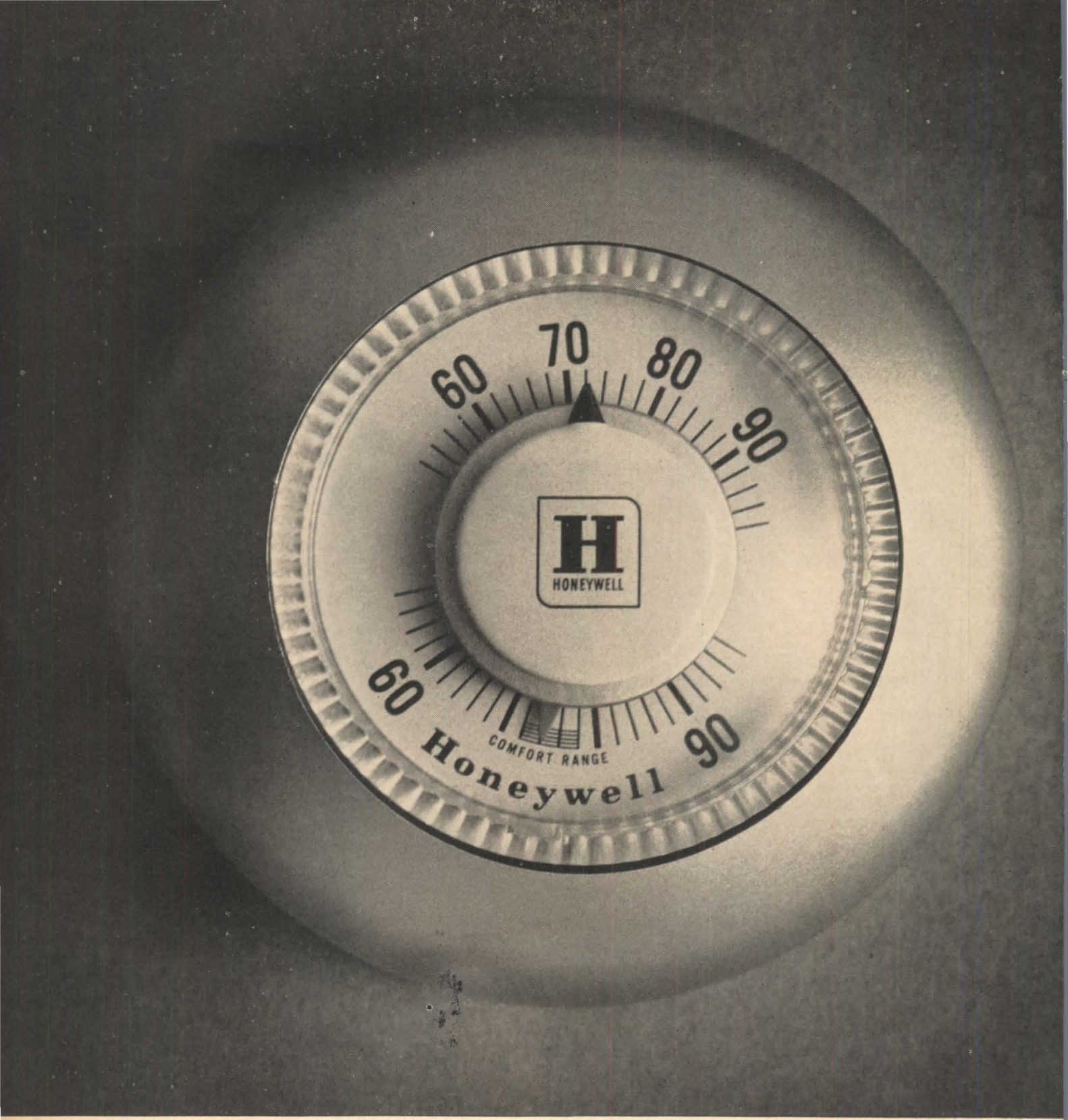
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DOORS/WINDOWS

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Continued on page 78



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DOW

Continued from page 75

brochure. *Frames* are rust-resistant and easy to install. Brochure includes heights and width sizes, detail chart of frames in all types of construction, and specifications. Amweld Building Products, 140 Plant St., Niles, Ohio.
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Metal Door Manual

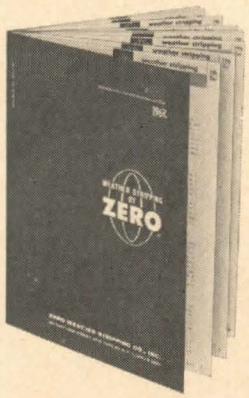
Engineering manual containing data and specifications information on hollow-metal doors and frames has been made available. Manual includes technical information on kalamein doors, fire doors, industrial doors, and sound-insulation doors. Pioneer Industries, 401 Washington Ave., Carlstadt, N. J.
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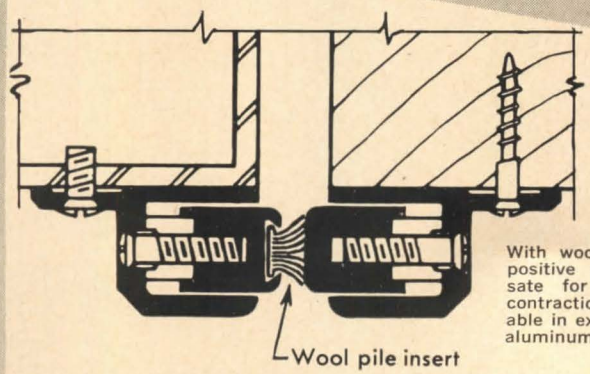


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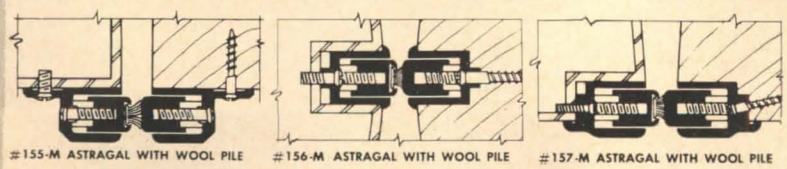
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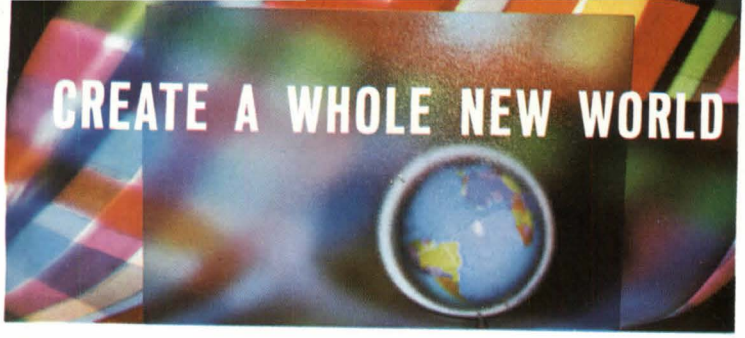


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Coolite, Glare Reduced, installed in Pacific High School, San Leandro, California.
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Coolite wire glass graces Prince of Peace Lutheran Church, Phoenix, Ariz. Glazing Contractor: W. P. Fuller & Company.

Coolite wire glass spans western elevation in Belleville Township High School gymnasium, Belleville, Ill. Associated Architects: Charles E. King & Wesley W. Chorlton.



Coolite, heat absorbing glass, controls light and temperatures in Parkway Consolidated School, St. Louis, Mo. Architect: Schwarz & Van Hoefen. General Contractor: Swan Construction Company.



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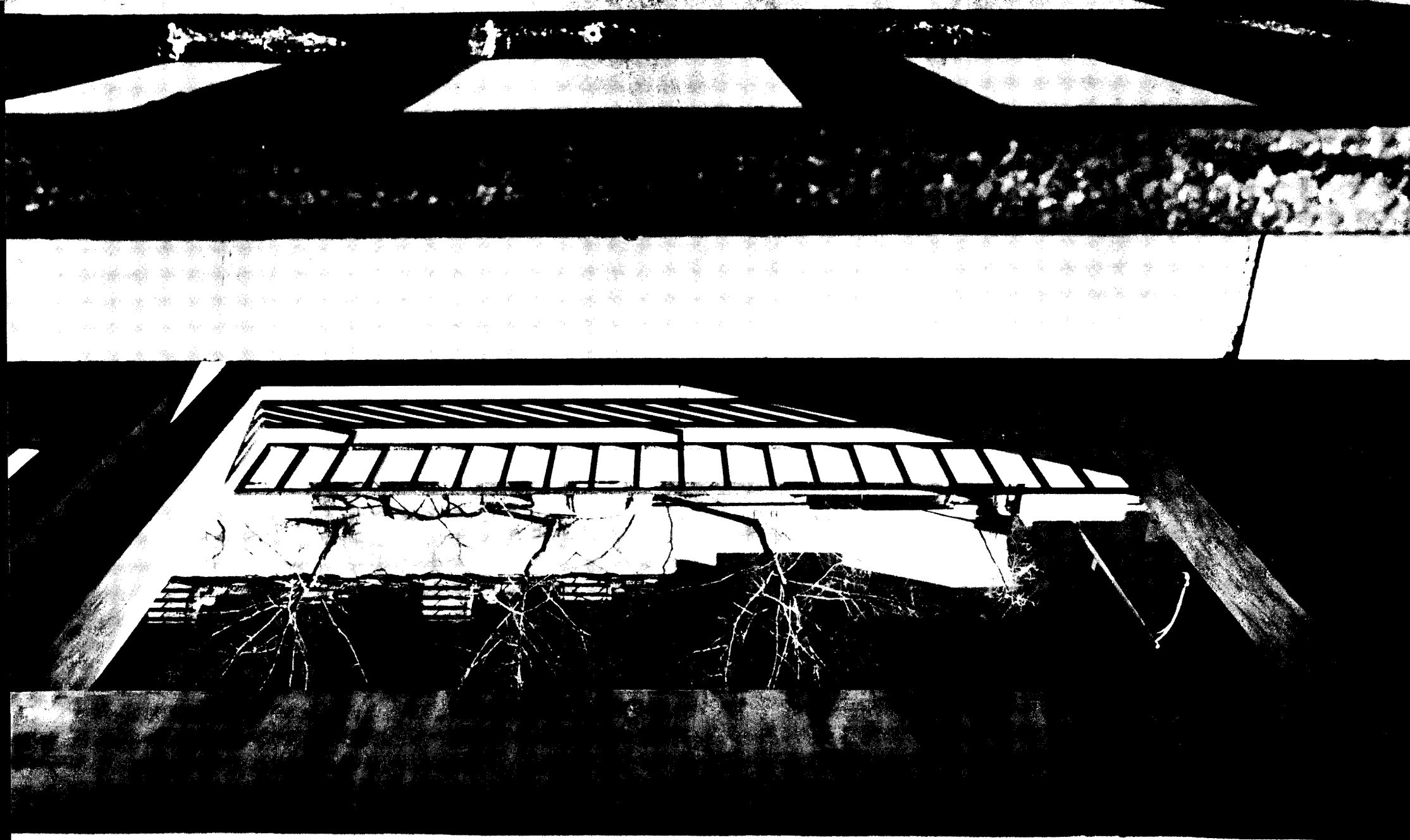
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EDITORIAL

Designing by sliderule is the sad result of a straightjacket imposed on architects by various regulatory agencies. It all began with zoning ordinances, and zoning ordinances began with the spread of the open-space ideal advocated and propagated by the pioneers of the modern movement in architecture and city planning. The theory that low density and low land coverage are always desirable, and high density and high land coverage are not, is the theory on which the existing zoning laws are based; and on the zoning laws are based the rules of FHA and similar institutions. An architect confronted with these regulations spends so much time calculating floor area ratios, land coverage percentages, angles of setbacks, distances between buildings, all other distances, ratios, formulas, and what have you, that often he has hardly any time or energy left to design—design in the true meaning of the word. When he is confronted with two, sometimes even three, different sets of rules applying to a single job, the juggling and comparing of all the different figures requires a computing machine, or at least a computer mind.

I do not doubt that all these rules were created by men of good intentions. Unfortunately, the results are often more detrimental to orderly development of cities than beneficial.

In New York City, for instance, the new zoning ordinance, introduced recently, was heralded as a great achievement that will finally enable New York to develop as a city of great beauty.

I doubt this. The old zoning laws created the famous New York wedding cake architecture; the new ones, I suspect, will be responsible for other evils. They are liable to create much bad architecture in the name of good architecture.

One architect, now designing a building on Central Park South, is dismayed that he will be responsible for breaking up that famous thoroughfare. At present, this street consists of an orderly, uniform row of buildings that frame the south border of Central Park. They are all approximately the same height and lined along a common building line. The new building—which has to conform to the new laws—could be designed either on the building line but only to the height of six stories and then stepped back, or set back from the building line and then rise as a sheer slab to the full height. In either case, the continuity of the street could not be preserved. The latter solution was finally chosen, and soon New York's Central Park South will look as though a tooth was knocked out of its previously handsome physiognomy. Is this what James Felt, the City Planning Commissioner responsible for the new zoning laws, meant when he said on a television interview that the most wonderful aspect of the new laws is that the old street pattern will be destroyed? I personally do no see anything wonderful about this.

The moral of the story is that all laws and rules that attempt to control our environment should be implemented only to *prevent* bad planning and bad design perpetrated by those who are incompetent or by those whose aim is mere exploitation. They should not be imposed in cases where their nonapplication would result in a superior solution.

As Urban Renewal Commissioner William L. Slayton stated in a recent speech: "The zoning ordinance was the hope for the cities in the 30's and 40's—and indeed zoning has prevented unwise growth in many ways. But the zoning ordinance is a negative control . . . it is a limited, negative, noncreative mechanism for controlling city development." And he added: "Urban renewal permits the city to look positively at the setting of the structures and their relationship and consequently to judge the development in terms of design and funcion—not in terms of meeting mathematical formulas."

Let us hope that this approach to urban planning will prevail in future urban renewal projects. There is no reason, however, why it should not also be used in all cases where buildings are being built. Unless such a change in attitude takes place, it will not be possible to maintain the historic continuity of cities, nor will creative architects be able to evolve truly new urban patterns. Whenever bureaucracy triumphs over creativity, the world is always poorer for it. ■



GENIUS LOCI: THE HISTORIC CONTINUITY OF CITIES



The seeming impossibility, today, of establishing a harmonious relationship between new buildings and the architectural environment into which they are placed is perhaps the result, not of stubbornness or unwillingness on the part of the architect, but of his inexperience and uncertainty as to how best to achieve it. In the following article, Peter Collins, Professor of Architecture at McGill University, analyzes several historic examples, among them the all-time favorites of architects, the Piazza and Piazzetta San Marco and its architecture of various periods; and a later work, Perret's apartment house on the rue Raynouard in Paris, which is a particularly fitting and instructive example in terms of this issue, devoted to the planning of apartment houses within the context of their environments. The author demonstrates, through his precise analyses of the relationship of new buildings to their neighbors as well as to the entire neighborhood, that there undoubtedly **is** a way of achieving architectural harmony without compromising contemporary principles.

BY PETER COLLINS

One of the most striking and perhaps most disquieting paradoxes of modern architecture is that whereas the "Pioneers of the Modern Movement," as Nikolaus Pevsner called them—"that generation of giants who created a new style independent of the past"—considered that their principal victory lay precisely in the overthrow of the 19th-Century concept of "styles," no generation of architectural historians has ever classified its contemporary architecture into so many stylistic subdivisions as our own. "The 'styles,'" wrote Le Corbusier, caustically paraphrasing Viollet-le-Duc, "are a lie. Style is a unity of principle animating all the work of an epoch." Yet despite this perspicacious definition, and despite Walter Gropius's vehement assertion that "a 'Bauhaus Style' would have been a confession of failure," the works of these men, like those of their contemporaries, are now being classified stylistically by architectural historians with such chronological exactitude that Pevsner has detected at least 18 recent examples of what he calls "a Return to Historicism" involving "the imitation of styles which had never previously been revived"; that is to say, of recent buildings constructed in "styles" presumably to be considered authentic only in the first quarter of this century. There is already, he explained in a lecture to the Royal Institute of British Architects, "neo-Art Nouveau (which includes neo-Liberty and neo-Gaudi) neo-de-Stijl, neo-School-of-Amsterdam, neo-German-Expressionism, and finally to a certain extent, neo-Perret"; and he hinted darkly at the prospect of a Ronchamp Revival and the imminence of neo-Maison-Jaoul.

It must be said at once that the essence of Pevsner's total argument is an entirely convincing plea for the return to the principles of "form related to function," and as such no practicing architect could possibly quarrel with it. On the contrary, most of those who have read his lecture as published in the April 1961 issue of the *R.I.B.A. Journal* will have fully endorsed his general thesis, especially his tacit admission that Art Nouveau and German Expressionism are not only bad in their revived form, but were bad in their original form, and always will be bad, since neither "share with the early Modern Movement the regard for function." But one may wonder whether some of his examples of "Historicism" really are revivalistic (for that is what "historicism" means for him), or whether these returns to earlier forms are not occasionally justifiable within the principles of modern architecture.

Let us take, for example, one of the most striking buildings included in Pevsner's lecture, namely, the Torre Velasca in Milan by Belgiojoso, Peressutti and Rogers **(1)**. Since this building is constructed of reinforced concrete, with an exposed, cast-in-place frame, with intermediate precast mullions spaced at regular intervals, and with precast infilling panels, it might fittingly be included in the category he entitles "neo-Perret," especially in view of its structural similarity to Perret's apartment block in the rue Raynouard, Paris, built 30 years before **(2)**. Moreover, the fact that one of the three architects responsible for the Torre Velasca published a biography of Perret in 1955 would seem to give weight to such an interpretation. Yet not only does Pevsner not classify it as neo-Perret (a term he reserves for Edward D. Stone's Raincid precast tracery); he labels it "neo-Art Nouveau" because it bears a superficial formal resemblance to a metal framed office building constructed by G. P. Chédanne in Paris in 1903 **(3)**.

The formal similarity between the upper part of the Torre Velasca and the upper part of the "Le Parisien" office building in the rue Réaumur is indisputable; but it can be fully justified on purely functional grounds. The top six stories of the Torre Velasca are apartment floors, whereas the lower part of the building consists of office space, and the enlargement of the



1



2



3



4

upper part corresponds quite rationally to the increased size of floor area demanded. Consider, for example, how the shape of the Torre Velasca was justified by G. M. Kallman, the exponent of "Action Architecture" (and now one of the architects of the Boston City Hall), at the time of its completion. "It is not a self-sufficient structure that could be located anywhere," he wrote in the *Architectural Forum* in February 1958; *"instead, it is a valiant essay in the neglected art of fitting modern architecture into a historic continuity of building, within which it seeks its own status.* Unlike most modern architecture, which is displaced, rebellious, and alien to its immediate environment, the Milan tower shows a definite response to the forms and figuration of its surroundings. . . . The giant mushroom shape of the tower recalls medieval machicolated defense towers. The cagelike appearance of the exterior frame is more reminiscent of Gothic structure than it is of skeleton frame and curtain wall.... *But the tower does not have a deliberately historicized silhouette.*... The more closely the tower is studied, the more apparent its complex dialectic becomes—between function and form, construction and ornament, new technology and ancient forms" (italics mine).

It seems therefore opportune to consider the whole question of "stylistic" imitation in the 20th Century, because it may well be that the depressing conclusions of modern art-historical analysis result simply from a refusal by art historians to distinguish between changes *of* style and changes *within* a style;

5



to distinguish, in other words, between what biologists would call mutations and variants. In architecture, this distinction corresponds to buildings which are stylistically of a different species, and to buildings which, though stylistically of the same species, are unfashionable or archaic. I shall try to show that whereas stylistic imitation is as reprehensible as ever, variations within a style (that is, within "the unity of principle animating all the work of an epoch") constitute simply what William H. Jordy aptly calls "the overlapping gamut of expressive possibilities."

First, let us consider the meaning of the word "archaic." The notion that all living styles develop like living organisms, "and have their birth, growth, maturity and death," is at least as old as Vasari (from whom this quotation is taken), and seems a commonplace of every phase of architectural history except our own. Now archaism (birth and early growth) has two meanings in architecture, since architecture is both a science and an art. Either it means that a form has been scientifically or technologically superseded, in which case we say it is obsolete. Or it means that a form has been artistically superseded, in which case we say that it is unfashionable. The first kind of archaism is purely objective, in that what is technologically obsolete can never cease to be so for a given state of society (though it can nevertheless legitimately be employed —indeed, in my opinion, it should invariably be employed—whenever architects are obliged by circumstance to build with traditional building materials and methods). The second kind of archaism is purely subjective, since what was fashionable 20 years ago may well become fashionable again tomorrow. Thus architects should feel no shame at adopting archaic forms and techniques in order to harmonize new buildings with an existing architectural environment, *provided that they do not betray the contemporary principles of stylistic unity;* a unity which, in the 20th Century, is best defined by what John Summerson calls "obedience to the programme" (or, as we usually say—functionalism) but which is also to be defined, to my mind, as the notion of the honest expression of the structural means employed.

This problem of creating environmental harmony with new buildings was the subject of a most interesting lecture given at the AIA Seminar at Cranbrook in 1961 by Dean Holmes Perkins. Why, he asked in effect, can we not learn the lesson of Assisi, of Venice, and of Paris, where all the buildings, of whatever age, seem infused by some *genius loci* so as to exist in harmony with one another? Why, he asked, as he projected a sequence of splendid colored photographs of these cities onto a screen in rapid succession, do we not still consider it our duty to fit new buildings into existing urban patterns and textures, as was done so successfully in the past? He gave no examples of how anyone had achieved such harmony in the 20th Century, and when questioned specifically on this point, with respect to Paris, said he did not know of any work by a reputable 20th-Century architect which fulfilled this condition.

Now it is not surprising that he was unable to give examples of harmonious modern buildings in either Assisi or Venice, since these cities are in no sense modern, and indeed for this reason were poor examples to take. But in Paris there is surely a very striking example of this kind of harmony to be found in all the later works of Auguste Perret, and perhaps in years to come, when architects are more concerned with creating humane environments than with becoming Form-Givers, his achievement in this respect may attract the attention it deserves.

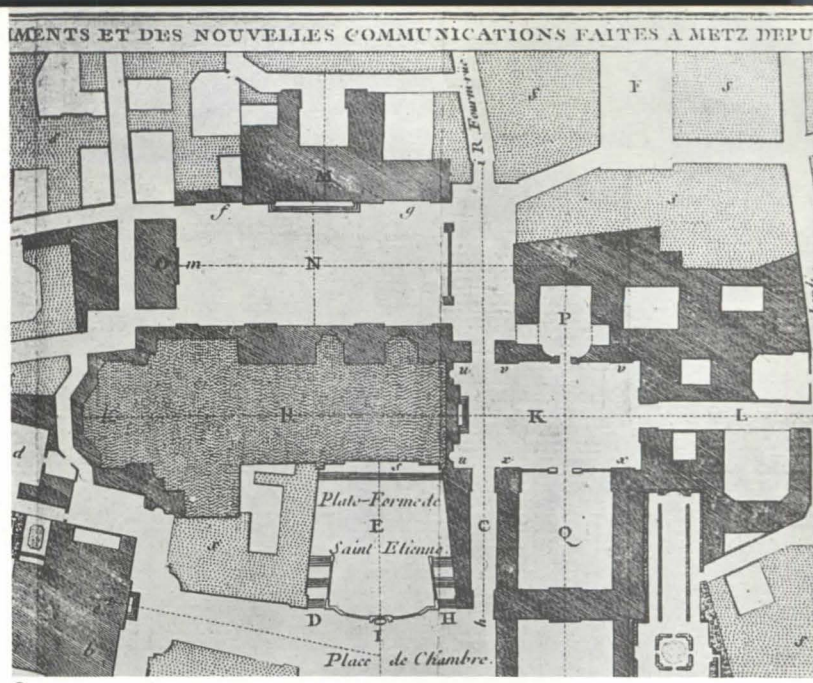
There is no need for me to waste time justifying the 20th-Century character of 51–55 rue Raynouard from a structural or a functional point of view, since I have already done this in my book, *Concrete: The Vision of a New Architecture.* I would simply observe that by designing the building in accordance with the absolute limitations imposed by the Municipal Building

Code, and by proportioning the fenestration in accordance with local traditions, Perret produced a building which is so unostentatious that those who travel through this old suburb of Paris would hardly appreciate that it was designed by a "Pioneer of the Modern Movement" unless their attention were specifically drawn to the plaque recently affixed to the wall. In this respect, it is vastly different from Perret's earlier and universally extolled apartment building in the rue Franklin **(4)**. Everyone knows the practical reasons why he was led to encase the reinforced concrete frame of the latter building in colored tiles, and why he recessed the facade in the center. But though this building is "stylistically" acceptable to the art historians (presumably because it is covered with the Art Nouveau decoration of the era, and possesses spatial qualities shared with some of Victor Horta's houses in Brussels), it is, from the point of view of urban environmental harmony, deplorable, since it is completely alien to the other apartment buildings in the same street.

Perret, who in his later years was accused by Le Corbusier of betraying the Modern Movement, undoubtedly lacked that abstract vision of a New Architecture which enabled Le Corbusier to envisage destroying the whole of Paris north of the Seine, and substituting a symmetrically arranged group of widely spaced cruciform glass prisms, 600 ft high. He was conservative, perhaps even prosaic, and he may well have inherited too many inhibiting traits from the parsimonious peasant stock from which he sprang. But he was a Parisian who loved Paris; who delighted in its character, its traditions, its atmosphere, and the way of life of its people; and it was in Paris that he mainly built.

If we turn to Parisian architecture of the "Renaissance" period (the period, that is, which Perret's "frozen classicism" is usually accused of "reviving"), we also find examples of deliberate archaism, the most notable being the successive additions to Lescot's Louvre, and the alterations, made by Francois Mansart in the 17th Century, to Lescot's 16th-Century Hôtel Carnavalet **(5)**. When describing the latter building a century later (in 1754), Jacques-Francois Blondel, the future professor of architecture at the Academy School, wrote: "How many architects inferior to Mansart have buried excellent works in oblivion through fear of comparison with their own products, or through the ridiculous vanity of believing that nothing except that which is produced in their own time, or executed under their own orders, is worth preserving?"

Blondel himself later had practical experience of the same problem, and indeed, one of the most instructive examples of deliberate archaism in the interests of environmental harmony is to be found in the porch he added to the west facade of the medieval cathedral at Metz **(6)** in 1764 (later destroyed to make way for a pseudo-Gothic porch during the German occupation of Alsace-Lorraine). Blondel's problem was to design a porch **(7)** which would harmonize not only with the medieval cathedral, but also with the new buildings facing it **(8)** which he was constructing as part of an urban renewal scheme. Now for anyone familiar with the surviving works of Blondel (who was among the leading French architects of his age), the resultant design must seem at first sight inexplicable, since, although it obeys all the principles of classical architecture, it in no way corresponds to the forms normally used by him, or by his more famous contemporaries such as A. J. Gabriel, the architect of the Petit Trianon. But on careful examination, it will be seen that his strange combination of elements (notably the Corinthian columns combined with a Doric entablature—an arrangement admitted by Vitruvius but never normally used—and the rather archaic pediment) are all attempts to create the impression of what we now call "Early French Renaissance," but which Blondel himself described on several occasions as "semi-Gothic." "Thus, in its ensemble and its



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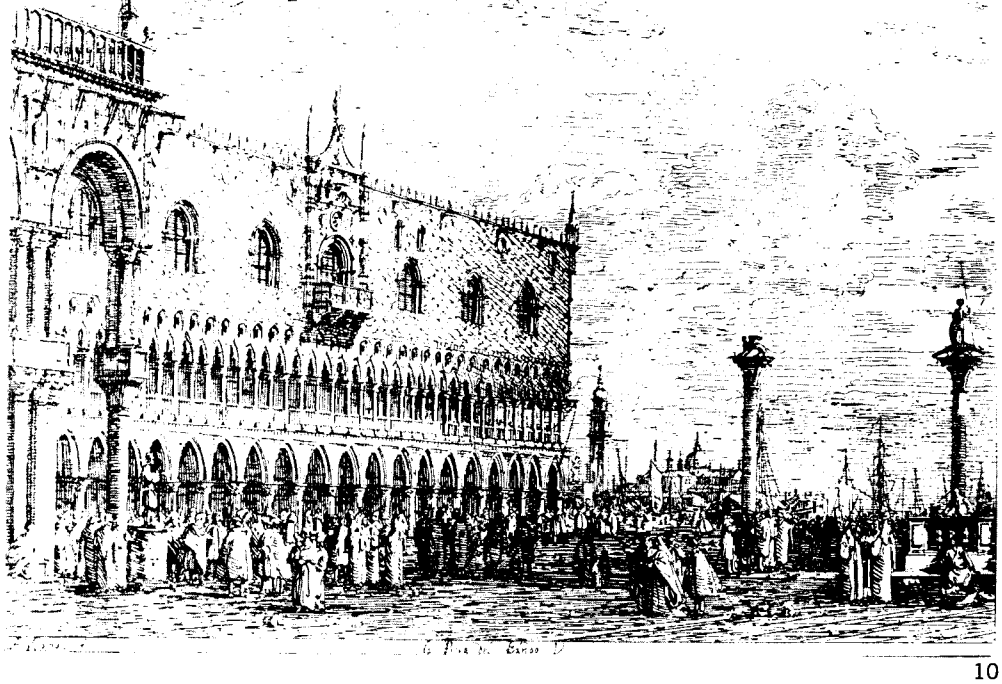


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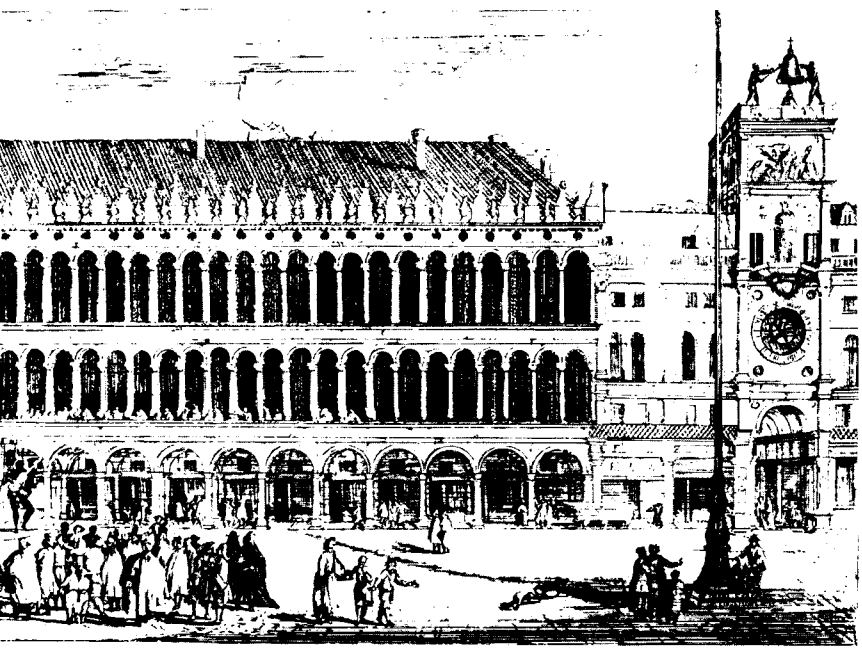
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ornaments," he wrote, "the porch at Metz offers a composition in some way analogous with the upper part of this ancient edifice. My drawings will make clear the means used to conciliate this new structure with the ancient Gothic, as well as with the new surrounding buildings."

Admittedly, the porch at Metz is an obscure example. I shall conclude, therefore, with the best-known example of architectural harmony given in the textbooks, namely the group of façades constituting the Piazza and Piazzetta S. Marco in Venice **(14)**. These plazas are the classic historical examples of successful urban spaces; yet I have never yet seen any precise explanation of how the success was achieved, nor do I know of any author who clearly indicates that the whole sequence of façades is one of the most subtle examples of deliberate archaization ever built.

The basic civic building around which all the others were consecutively assembled was naturally the Doge's Palace, built during the Gothic era **(9, 10)**. The new buildings, as they stand today, were successively the Procurazie Vecchie **(13)**, 1520; the Library **(11, 12)**, 1536; and the Procurazie Nuove **(15)**, 1584. Now if one inspects them carefully, it is obvious that all these later buildings were deliberately modelled on the Doge's Palace **(9)**, which, it will be recalled, has two superimposed arcades, the upper arcading being provided with twice as many columns as the lower. The façade of the Procurazie Vecchie copies this rhythm exactly, by simply substituting semicircular

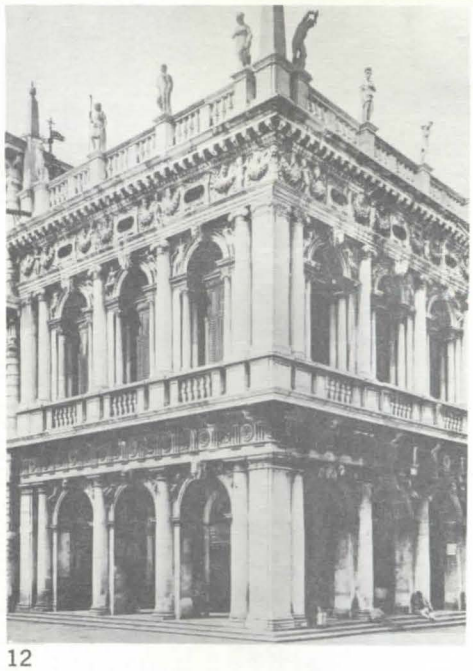
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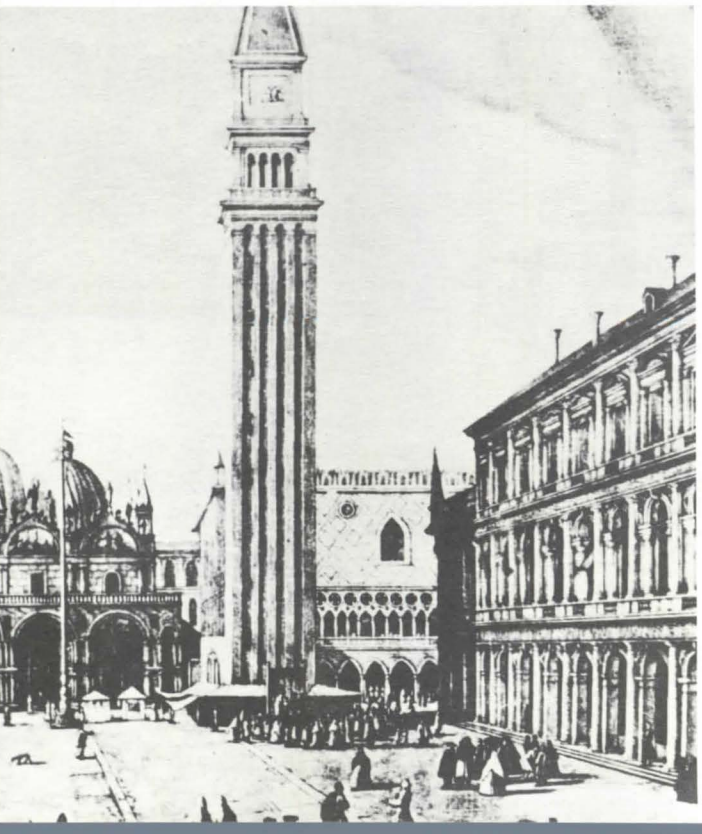


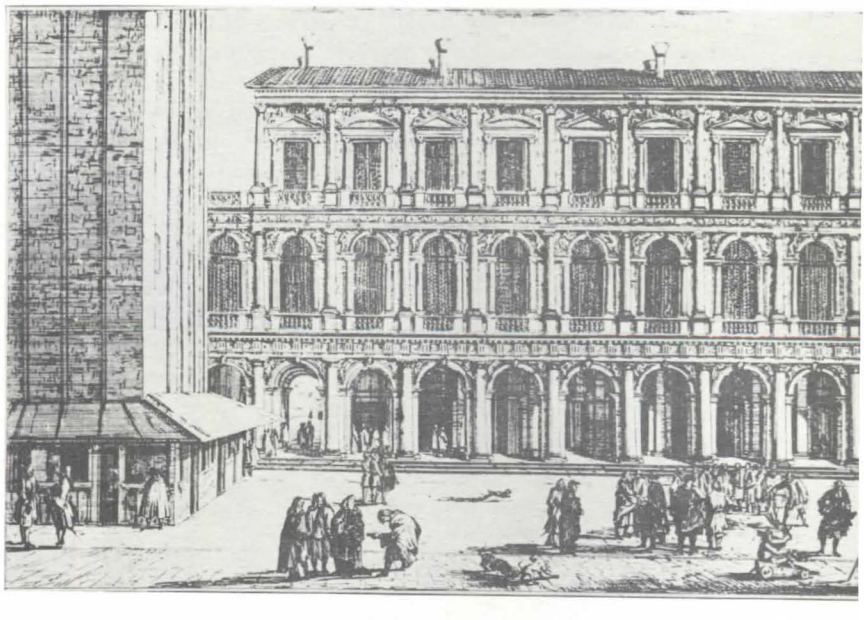
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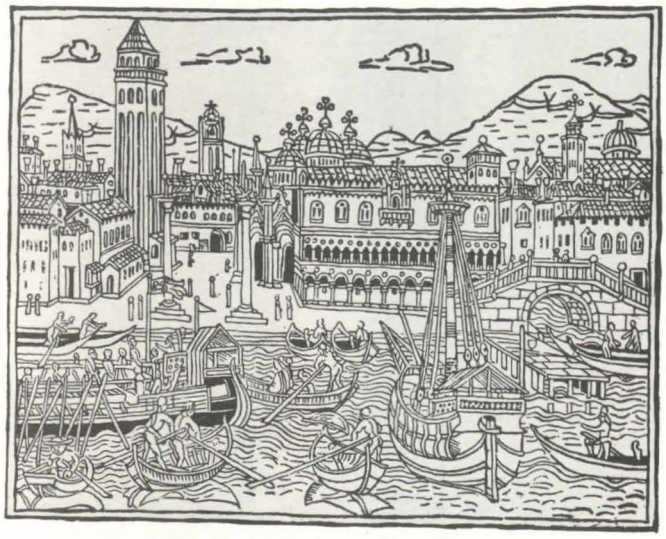
Renaissance arches for pointed and trefoiled Gothic arches. The façade of the Procurazie Nuove copies the Library (which it adjoins), and substitutes only the upper story (required for functional reasons) in place of the heavy entablature used by Sansovino. It is the Library itself **(12)** which is the most brilliant solution of the problem, for not only does it manage to reflect the Palace's top-heaviness and crenellations by means of a classical entablature of unusually heavy proportions, and by means of classical statues, but it recreates the double rhythm of the Palace's upper story by the introduction of a sequence of "Venetian windows," cleverly syncopated by means of small Ionic columns spaced at half the intercolumniation of the larger Ionic columns within the upper superimposed Order of the main colonnade. Interestingly enough, Sansovino's archaism is never regarded as slavish "historicism" by today's architectural historians; on the contrary, his building is widely regarded as one of the greatest buildings of the 16th Century, and it was so regarded by his contemporaries, such as Palladio, who unashamedly "revived" it at Vicenza 10 years later by adopting the "Venetian window" motif for environmental reasons of quite a different order.

The means adopted in order to achieve harmony at Metz and Venice are thus basically identical with those used by Belgiojoso, Peressutti and Rogers in Milan, and by Perret in Paris. Without in any way compromising contemporary principles (which in the 16th Century were based on the classical

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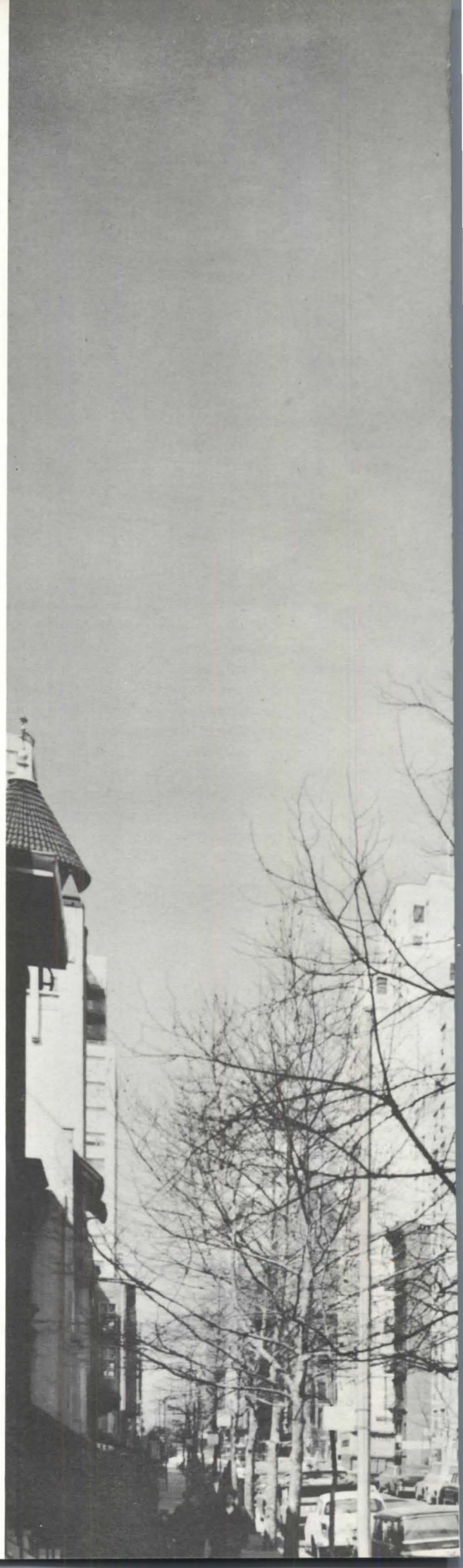
The Piazzetta San Marco before the Library was built.

Orders, and in the present century are based on rational structures and functional plans) all these architects deliberately disciplined their architectural forms to harmonize with earlier buildings nearby. They did not produce anything which art historians could recognize and classify as a new "style." On the contrary, they produced work so unostentatious as to be positively banal, especially if one uses the word in its strict etymological sense as meaning "common to all" the buildings around them. Nevertheless, it might not be a bad thing if more façades in our cities were as banal as the facades of Metz and Venice; for as Perret once remarked: "He who, without betraying the modern conditions of a programme, or the use of modern materials, produces a work which seems to have always existed, which, in a word, is banal, can rest satisfied. Astonishment and excitement are shocks which do not endure; they are but contingent and anecdotic sentiments. The true aim of art is to lead us dialectically from satisfaction to satisfaction, until it surpasses mere admiration to reach delight in its purest form."

For sources of illustrations used in this article, see page 193.

Detail of Perret's apartment house, rue Raynouard, Paris.







APARTMENTS IN THE CONTEXT OF AMERICAN CITIES

Few apartment buildings in the U.S. today can be said to be as truly integrated into their environments as is Perret's building for rue Raynouard in Paris, a detail of which is shown on the facing page. Though isolated attempts have been made in this country to preserve the **genius loci** and continue the architectural tradition of an area—as, for example, with the new apartment house by Mayer, Whittlesey & Glass, shown at left and on the following pages —most of the new construction is sadly disappointing in this respect. Some have put the blame on those architects who see themselves in the role of the "form-givers." Others feel that architects have abdicated too much of their role to the real-estate speculator, who is understandably more interested in economics than aesthetics. Then there are those who believe that American architects seldom have a stable environment in which to place their new buildings, nor a free hand to effect the desired integration. In the following presentations, some of the multiple aspects of this problem are discussed in terms of four recently completed apartment houses, all of which have been planned with particular emphasis on how they relate to their environments.

118-Unit Apartment House, New York City



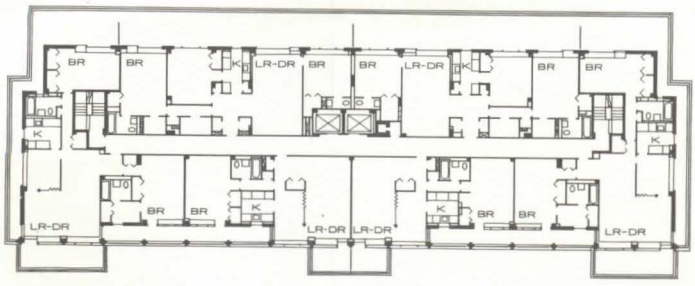
PHOTOS: BILL MARIS, EZRA STOLLER ASSOCIATES

333 EAST 69TH STREET, NEW YORK, NEW YORK • MAYER, WHITTLESEY & GLASS, ARCHITECTS • WILLIAM J. CONKLIN, ASSOCIATE PARTNER IN CHARGE OF DESIGN

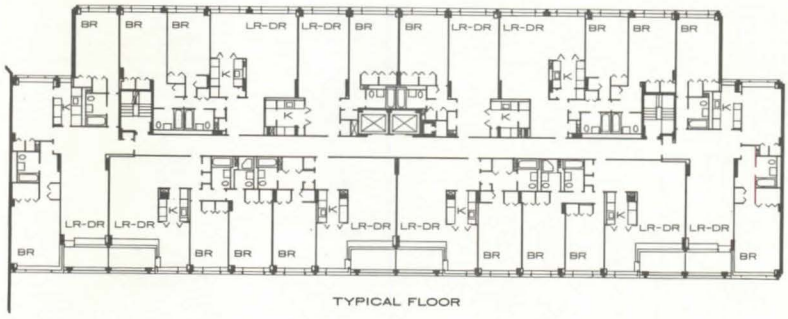
The pleasant tree-lined streets and elegant town houses of New York's Upper East Side have long attracted New Yorkers who appreciate a congenial urban living environment. In recent years, however, the area has been invaded by the real estate speculator, who, in the process of constructing typical maximum and immediate return apartment houses, has undermined much of the original character—the *genius loci*—of the neighborhood. "Most of these recent apartment buildings detract from the pleasant world they depend upon for their rent structure," suggests Conklin, who was in charge of the design of the building shown here—a notable exception to the run-of-the-mill apartment houses. "Brownstones and other character- and quality-giving structures," he says, "are torn down and replaced with structures which are a net loss to the scale and beauty of the area. In effect, these buildings are destroying the environment they came to inhabit."

That the trouble does not necessarily lie in the mere bulkiness of these new structures, but rather in their insensitivity, can be proven by this building, which, in spite of its height and length, does succeed in continuing the architectural tradition of the earlier houses. The building—one of the first of its type, incidentally, to be financed with a "Section 207" FHA-insured mortgage—is one of several new high-rise apartment houses on the north side of the street; a handsome row of early town houses is still intact along the south side. Design continuity between the old structures and the new building has been achieved by several means. Most importantly, the architects have devoted the first two floors to duplex units, which, with their private entrances and street-front gardens or private backyards, recall the nearby brownstones. Not only does this plan arrangement turn normally undesirable rental space into welcome and economically rewarding living units, but, most of all, these town houses are in keeping with the elegant character of the neighborhood. Carrying the design continuity further, the structural divisions of the concrete frame have

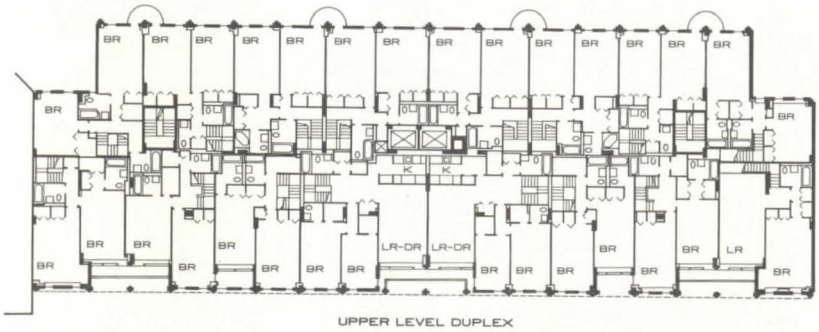




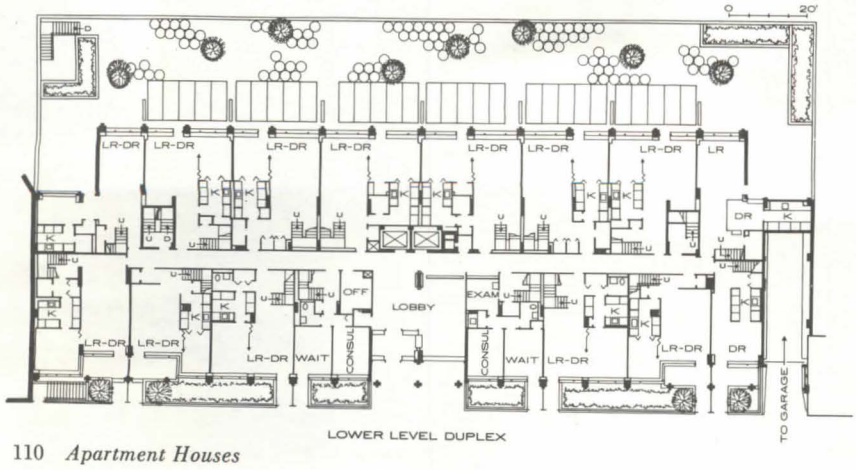
PENTHOUSE LEVEL



TYPICAL FLOOR



UPPER LEVEL DUPLEX



LOWER LEVEL DUPLEX

been scaled to the neighboring houses; brown brick was selected to blend with the patina of the older houses; railings on balconies, on street-side gardens, and at the parapet, echo those of the buildings opposite. These considerations, as well as the varied fenestration and the stepping forward and backward of the façade, are all attempts to achieve architectural continuity with the neighborhood, and to give human scale to a large building.

In designing the interiors, the architects were particularly interested in attaining as much variety in apartment layout as possible. This was done in the belief that, "although most apartment builders, through the pressure of economics and structural and mechanical considerations tend to reduce the variety of plans and push the architect toward massive repetition, the inhabitants of the city continue their search for the special place to live—the unique, the unusual, the personal."

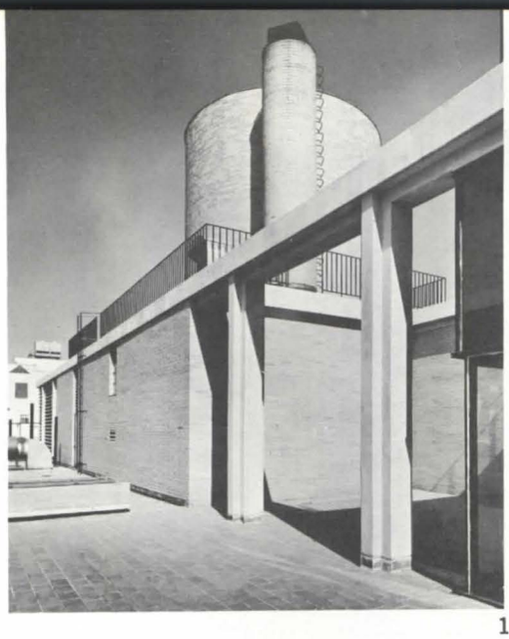
In addition to a larger-than-usual choice of apartment plans, each of the tenants of the building also has the use of part of the roof with a wind-protected roof deck for sunning and viewing **(1)** and a glass-enclosed recreation room **(2)**. Instead of the usual rooftop disarray, cooling tower, water tank, and chimneys bring to mind a large-scale brick sculpture.

Except for the steel-framing of the 58-car parking garage in the basement, the structural frame of the building is of reinforced concrete with flat slab floor construction. Exterior walls are of solid brick with concrete block back-up and furring. Interior partitions employ metal studs with gypsum lath and plaster. Windows are of steel—partially fixed, partially operable. Wood parquet is the floor surface in all of the living areas.

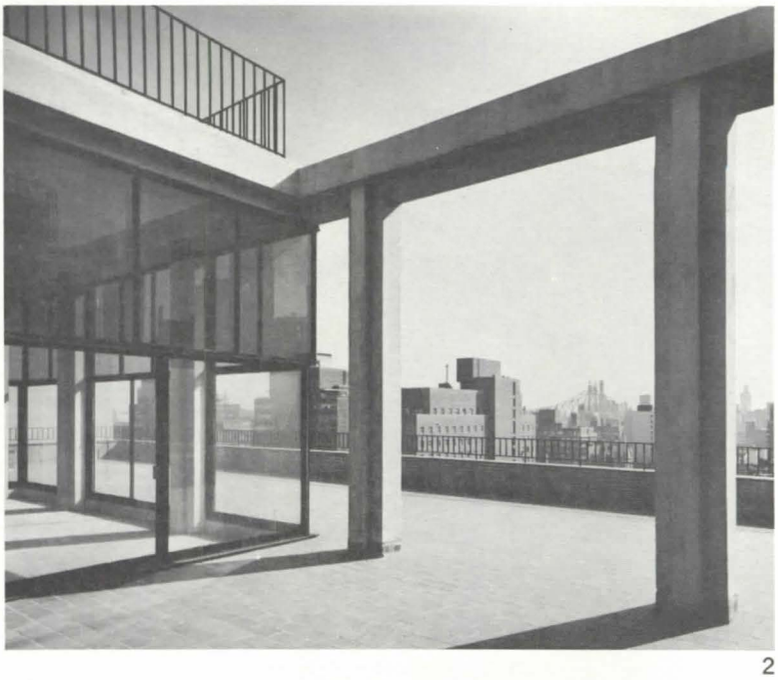
The building is centrally air-conditioned with individually controlled fan-coil units in each room of the apartment. Fan-coiled units also supply heating in winter.

Front and rear gardens of the town houses are landscaped. Plant material in the front gardens was selected primarily for screening purposes. Each of the rear gardens **(3, 4)** has a paved as well as a planted area. Since trees could not be set into the ground because of the garage below, they have been planted in reinforced concrete culvert pipes; other plants are in smaller asbestos cement pipe sections.

Robert Rosenwasser was the Structural Engineer for the building; I. M. Robbins & Associates, Mechanical Engineers.



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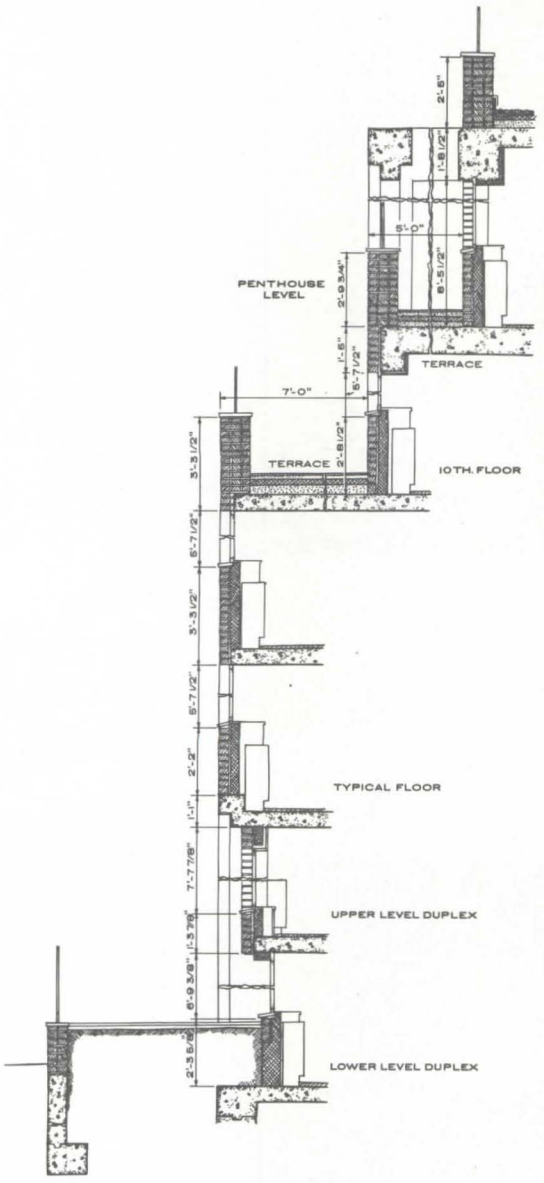
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A section through a portion of the south façade (detail above) *delineates the stepping back and forth of the various planes, which provide the building with its rich texture and strong pattern of light and shadow. The exterior columns also carry the heating and cooling risers, branching off through sleeves in the columns to the individual fan-coil units. In the typical rooms* ***(5, 6)****, they are centered in the window wall; in the living rooms of the larger apartments* ***(8)****, and at the penthouse level* ***(9, 10)****, they form window seats. Placement of the fan-coil unit and window differs considerably in the town houses* ***(7)****, particularly on the upper floor, where vertical openings recall the window proportions of the earlier brownstones.*



PHOTO: J. ALEX LANGLEY

2

132-Unit Apartment House, New York City

PHOTOS, EXCEPT AS NOTED: LOUIS REENS

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3



4

TOWER EAST • NEW YORK, NEW YORK • EMERY ROTH & SONS, ARCHITECTS • IRVING E. GERSHON AND RICHARD ROTH, JR., PARTNERS IN CHARGE OF DESIGN

On New York's Upper East Side, where "wedding-cake" apartment buildings appear on almost every corner, Tower East is a welcome exception. It is the only recent building in the neighborhood that does not substantially fill the pyramidal volume permitted under the zoning ordinance (recently repealed) that governed its design.

In adopting an unconventional solution, the clients, Tishman Realty and Construction Company, were encouraged by the unusual potentialities of the site. It comprises an entire blockfront, with major thoroughfares to the north and east; low buildings to the east and west allow extensive views, at least for the present. The apparent leveling off of the luxury co-operative market in New York gave them further incentive for constructing a "distinctive" building.

By law, the tower was limited to 25 per cent of the site area and, in height, to 300 ft above datum. It has been placed off-center in both directions to establish optimum separation from surrounding structures. The resulting spatial relationships are illustrated here in views from the north **(1)**, south **(2)**, west **(3)** and east **(4)**. The one-story commercial and service structure above which it rises occu-

In the lobby ***(5, 6)*** *surface materials change progressively from flagstone and precast concrete at the entrance to terrazzo, plaster, and mirrors, then to carpet and rosewood paneling at the elevators.*

The structural discipline of column and curtain wall is apparent in an empty apartment ***(7)*** *and discernible even in the furnished model unit* ***(8)***.



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pies the entire site, except for the small entrance garden.

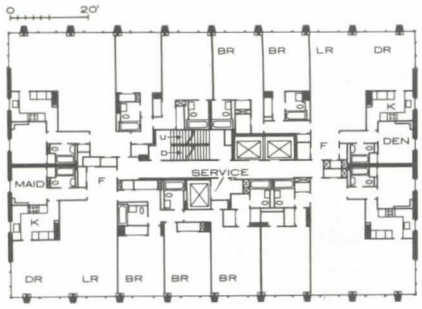
The tower scheme, with four apartments per floor, offered several advantages; a corner location for every unit; more light, air, and isolation from the street for the lower floors; and the economy of uniform layout and vertical continuity of structural and mechanical systems. Conventional "wedding-cake" buildings, on the other hand, have several features that offer significant advantages in the New York real estate market: variation in plan (if the prospect doesn't like one 5-room unit, you can show him another); the less restricted layout possibilities of larger floor areas; the opportunity to match the increased prestige of the upper floors with corresponding changes in the sizes of units and rooms.

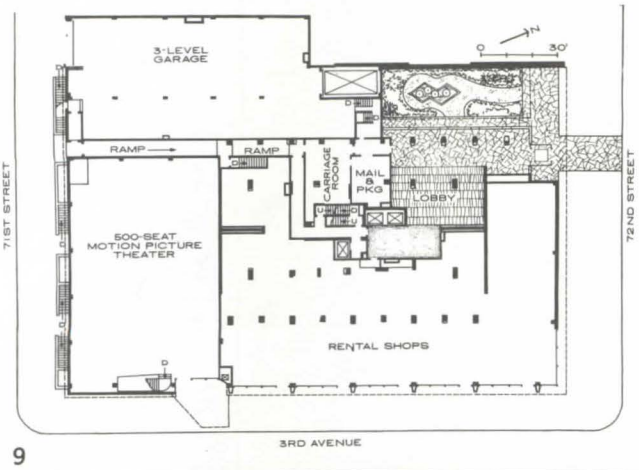
The layout of the tower floors is well integrated with the spacing of the exterior columns. All units have almost identical living-dining areas, which extend over 40 ft diagonally from the entrance to the cantilevered window corner. Balconies, found on many of New York's new "luxury" buildings, were ruled out as insufficiently useful to justify their cost. Considering their size, the apartments have limited closet space. There is a bathroom for every bedroom; those in seven-room units, however, are not conveniently located.

The flat-slab structure of the tower was designed by structural engineer Victor Mayper. It was constructed using an unusual climbing crane (see p. 157, JUNE 1962 P/A). The placement of columns on the exterior leaves the living space uninterrupted and gives a sense of security on the interior. The location of concrete shear walls on the north and south faces of the tower was dictated by structural needs, but they fit into the requirements of the plan, in which all services and circulation have been placed along the north-south axis.

Exterior curtain walls are of aluminum in a dark duranodic finish, similar in color to bronze, with dark gray window glass.

Among the commercial facilities at the street level is a small movie theater (included as a condition for acquisition of a previous theatre on the site), which was designed by other architects. The design of storefronts and signs has been controlled by the Roth firm, but the consistency of the building has been marred by the prominence of the movie marquee and the substitution of "natural" aluminum for dark duradonic in the storefronts.





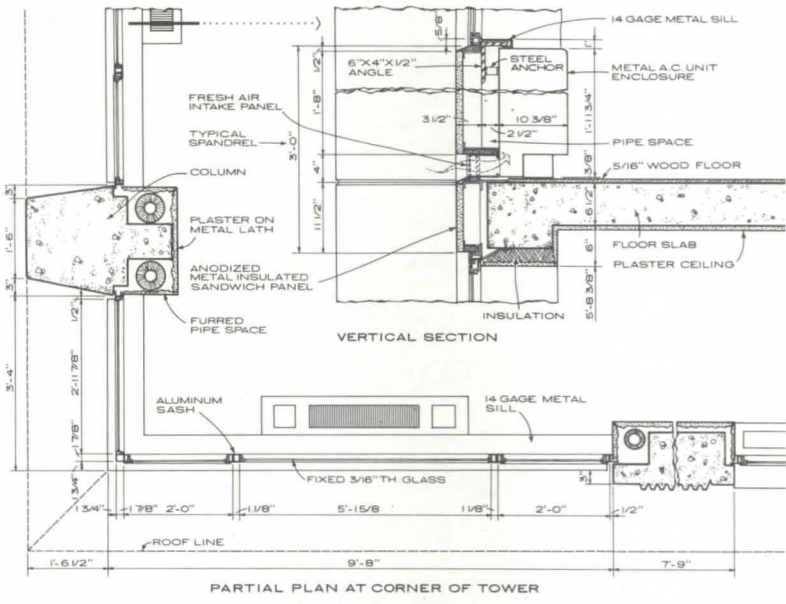


PHOTO: J. ALEX LANGLEY



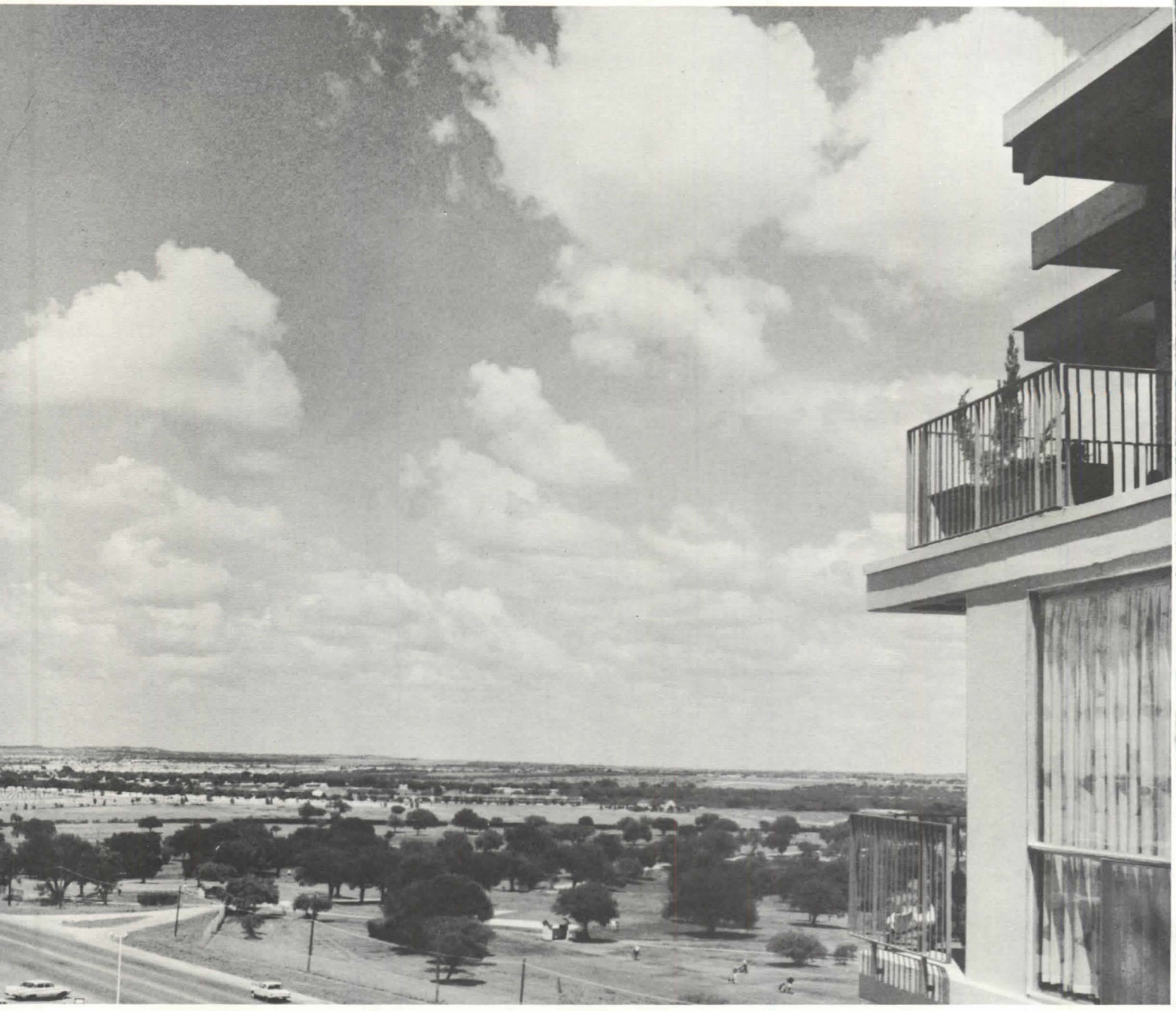


PHOTO (INCLUDING 5): ALLISON B. PEERY

45-Unit Apartment House, San Antonio, Texas

REGENCY HOUSE • SAN ANTONIO, TEXAS • ALLISON B. PEERY, ARCHITECT

The first private high-rise apartment house to be built in San Antonio since 1929 would not be a reality today had the owner followed his original idea for a garden apartment project of at least 35 units. Early in the design stage, however, the architect became convinced that "here was the classic case for multistory construction. A long exciting view on all sides—overlooking a golf course, playing fields, and a luxury residential area—could be available to every tenant by simply raising him off the ground." The result is a T-shaped block in dramatic contrast to its low-lying surroundings (1).

It was *not an arbitrary* decision. Given an owner whose only budget directive was to "make it as cheap as possible," the case for high-rise had to be carefully established. Actually, the architect designed both projects—high and low—and only after detailed cost estimates was it apparent that even with the cost of vertical transportation, the single tall building



3



PHOTO (INCLUDING 7, 8, 9, 11): FRANK LOTZ MILLER

4



2

PHOTO (INCLUDING 3, 6, 10): BEAU MOOD

1

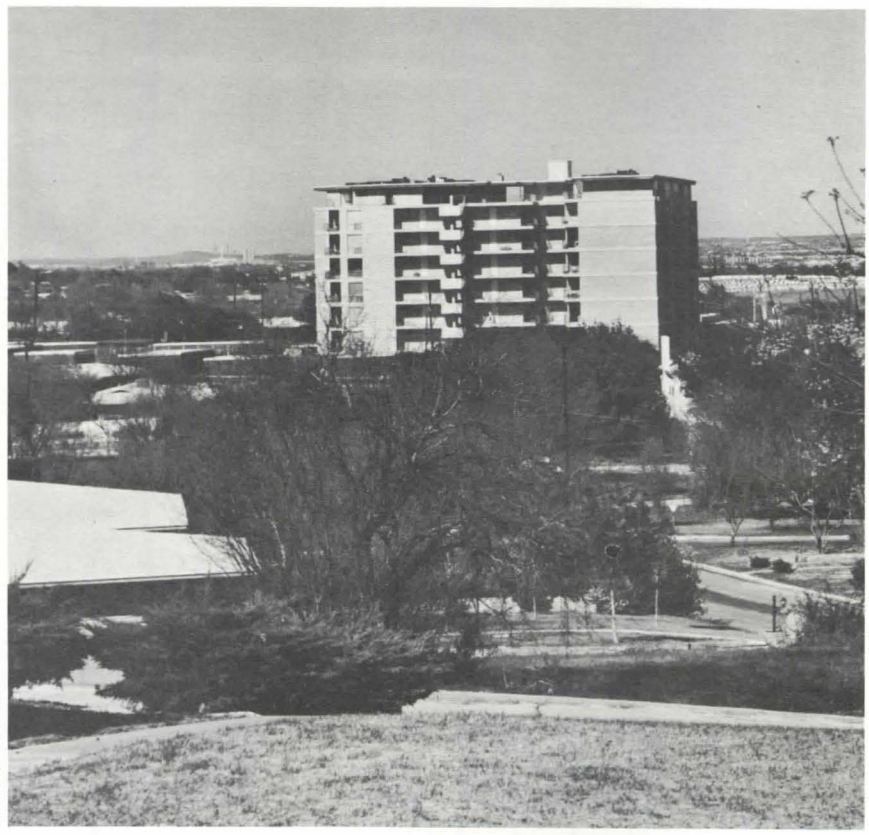
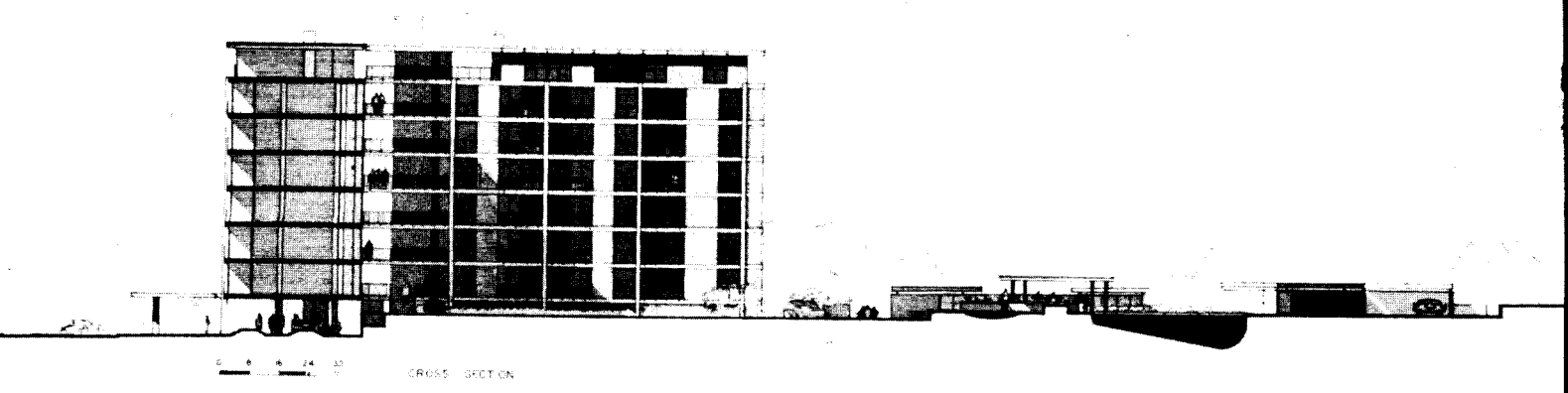


PHOTO: LARRY NICHOLS

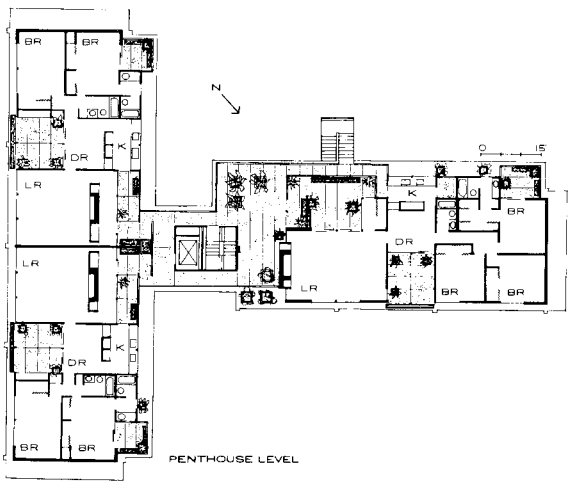
was the better investment.

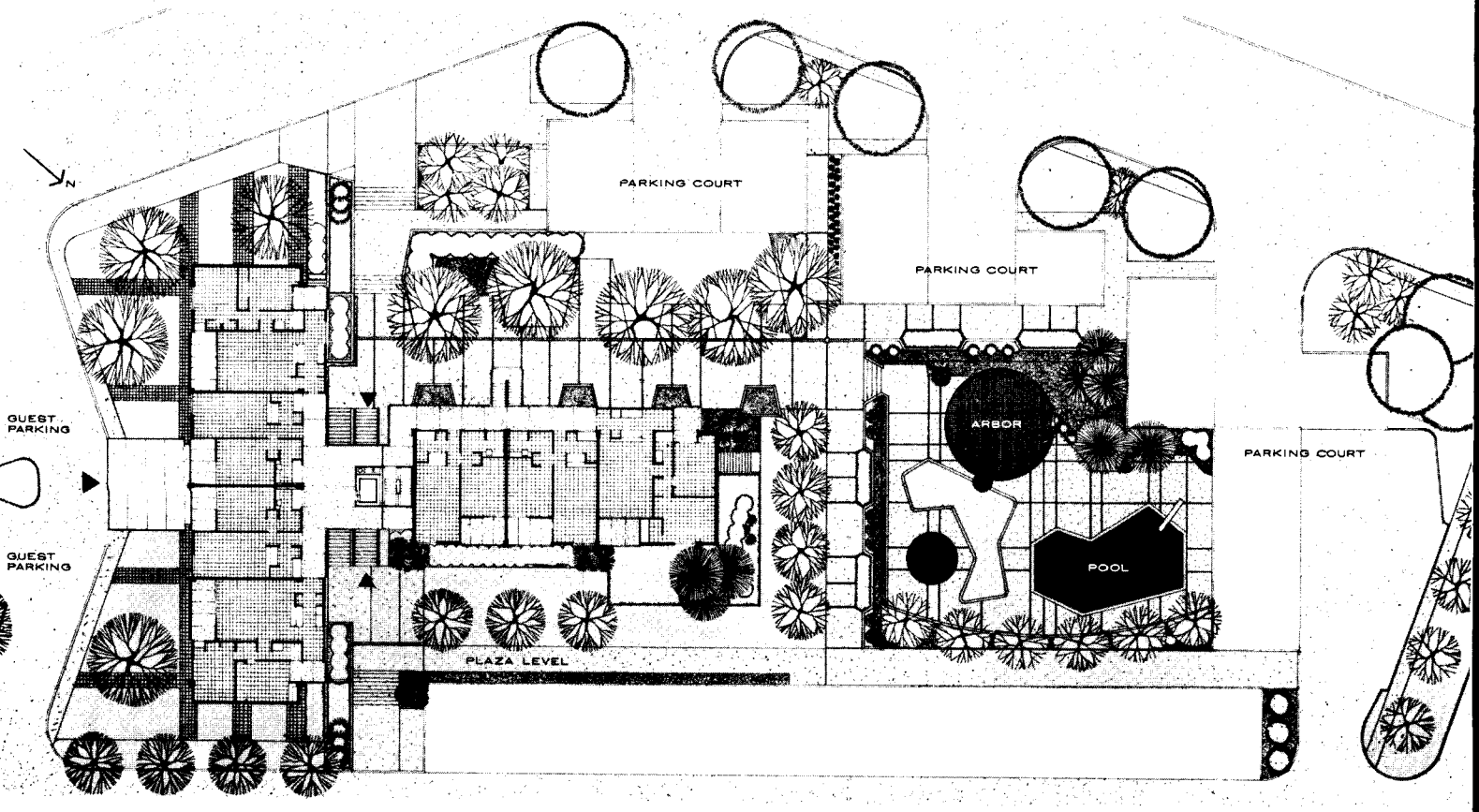
In order to put each occupant in touch with the view, Peery has used several devices. He has raised first-floor units above ground—a partial story at one end of the site **(2)**, and a full story over the main entry at the opposite end of the site **(3)**. He has given each apartment at least one terrace, and larger units have two. These are punched out of the building rather than hung onto the exterior **(3)**, insuring privacy as well as providing the required sun control. And, as a further means of bringing these apartment dwellers "down to earth," Peery has left the public corridors (located on the off-breeze side of the building) open to air and view **(4)**. The corridors themselves are "landscaped," with carefully chosen plants set into uniform containers; these echo both the lush greenery of the neighborhood and the planting of the elaborately developed site **(4, 7)**.

At ground level, there is a complex and well-planned sequence of paved and planted areas. Ground cover close to the building gives privacy to the terraces of



CROSS SECTION





With only seven units per floor, the scale of Regency House is an intimate one. To reach the building's elevator, tenants walk under the raised front wing, or enter the lobby directly from either side of the landscaped plaza. In the lobby, waste piping for the raised front wing has been ingeniously incorporated into a free-standing column, together with cantilevered seating ***(5)****.*

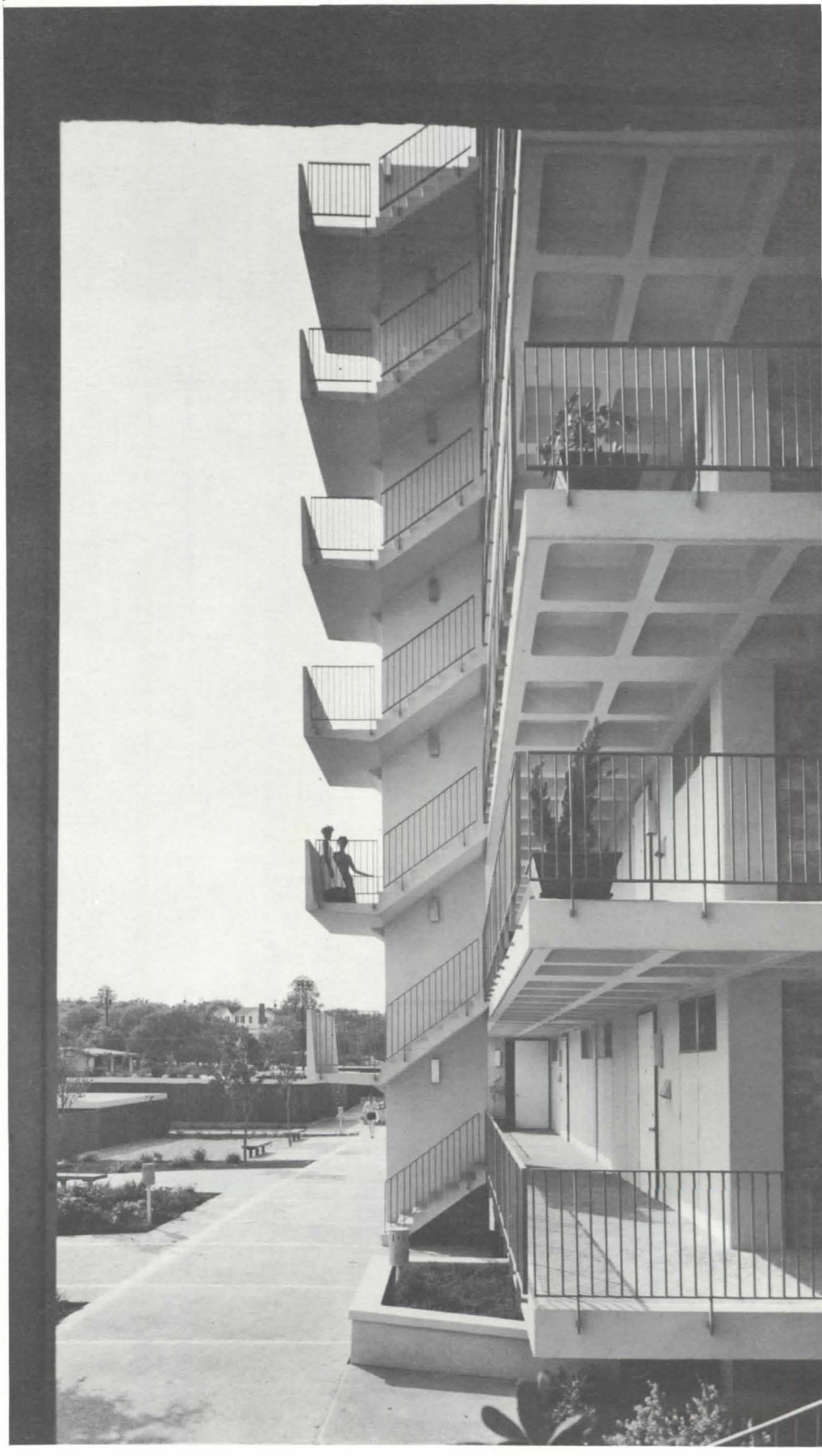
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lower floors. At the rear of the site are a pool, arbor, and play space. Underneath the raised front wing of the building, the open area is also landscaped, with hardy grasses in raised planting mounds. Parking courts form a low, fence-like enclosure to the site (7), serving to define the landscaped plaza as well as provide a barrier against the streets that surround the site on three sides.

The structural system is poured-in-place concrete; floors were poured over steel-dome forms for two-way waffle construction. This system was chosen because of its economy, and because it could be left exposed as the final finish, would give a high degree of sound insulation between floors, and would be compatible with the other masonry materials of the building. Exterior and party walls are a rough, hand-made Mexican brick, with a pleasing color and texture. Exterior walls of kitchens and baths (the only rooms to face onto outdoor corridors) are wood-framed, and covered with asbestos-cement panels. Colors are earth tones—rubbed concrete is off-white; brick is in the buff-to-cinnamon range; and paving has aggregate of the same shades as the brick.

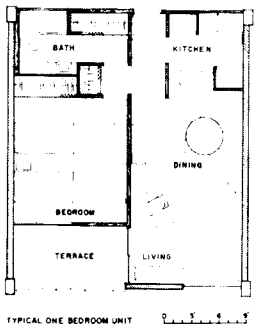
Consultants were Wm. W. Orrison, Structural Engineer; W. A. Moore, Mechanical Engineer; and Eckbo, Dean & Williams, Landscape Architects.



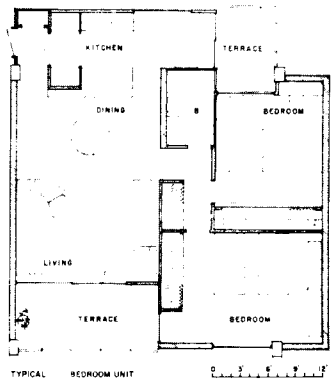
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TYPICAL ONE BEDROOM UNIT



TYPICAL BEDROOM UNIT



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Rooms at Regency House are generous in size, and the apartments unusually well planned. The long views from every terrace and window provide a continuous orientation to the natural environment. Materials emphasize natural textures. Paving of terraces is similar to paving on the ground—pebble-aggregate topping with divider strips of redwood ***(8)****. Party walls and exterior walls are of hand-made Mexican brick, and interiors are paneled in Philippine mahogany plywood* ***(9)****. Floors are clay tile* ***(10)****. Besides being easy to care for, these materials are also particularly effective in creating a pleasant and comfortable mood. The open corridors* ***(11)****, which somewhat resemble the streets of a quiet residential neighborhood, reinforce this mood. It is not surprising that the units are fully rented, many by former homeowners.*



11



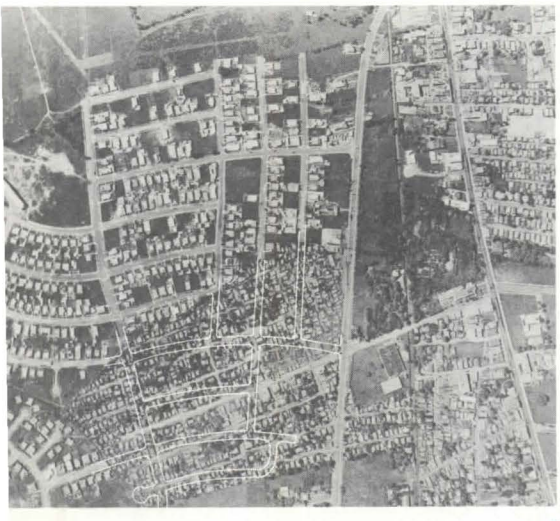
311-Unit Apartment House, San Juan, Puerto Rico

EL MONTE APARTMENTS, HATO REY, SAN JUAN, PUERTO RICO • EDWARD LARRABEE BARNES AND REED, BASORA & MENENDEZ, ARCHITECTS • HIDEO SASAKI, LANDSCAPE ARCHITECT

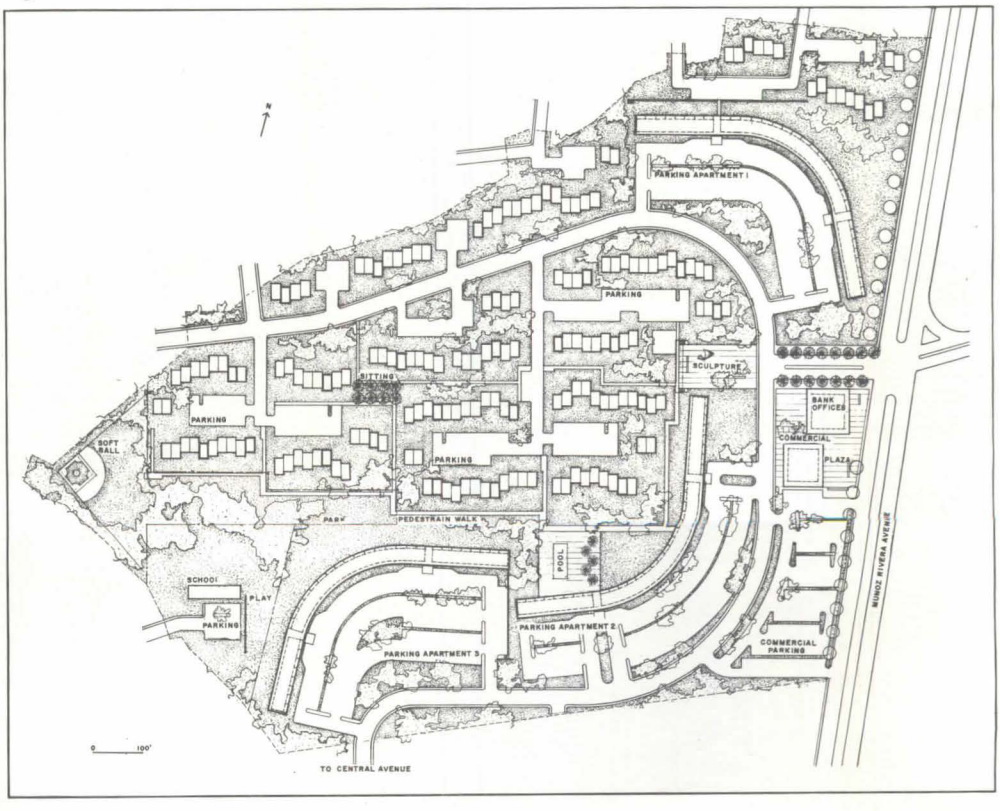
The vista when approaching San Juan from the east has been dramatically altered by the construction of this first high-rise apartment house in the area. Its distinct curvilinear form, seen from most directions as a horizontal rather than vertical mass against the horizon **(1)**, stands up as a landmark visible for miles in every direction. The building is equally notable for its economics, since it is the first middle-income rental structure in Puerto Rico, where new apartment houses are all in a high-income category, or follow the Latin-American tradition of the condominium. However, since the building was Government-aided and the first real departure from standard practice, El Monte was subject to numerous revisions and delays. Plans for this site, for example, were begun in 1952, when the Puerto Rican Housing Authority approved the 33-acre site for redevelopment.

Several plans were prepared by the local authorities in the period between 1953 and 1957, such as the zoning and land-use diagram shown superimposed on an aerial photograph of the site before demolition **(2)**. Without design pretensions, these plans simply attempted to establish the future density and street pattern. When, in 1958, the site became available for urban renewal, detailed proposals were submitted to the redevelopment authorities by interested developers and their architects. Surprisingly, the plan by Barnes and Reed **(3)**, submitted

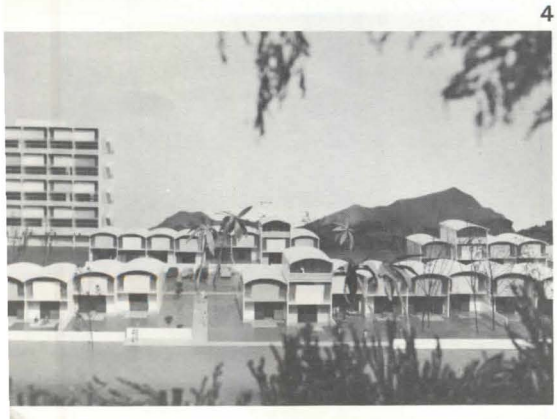
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3



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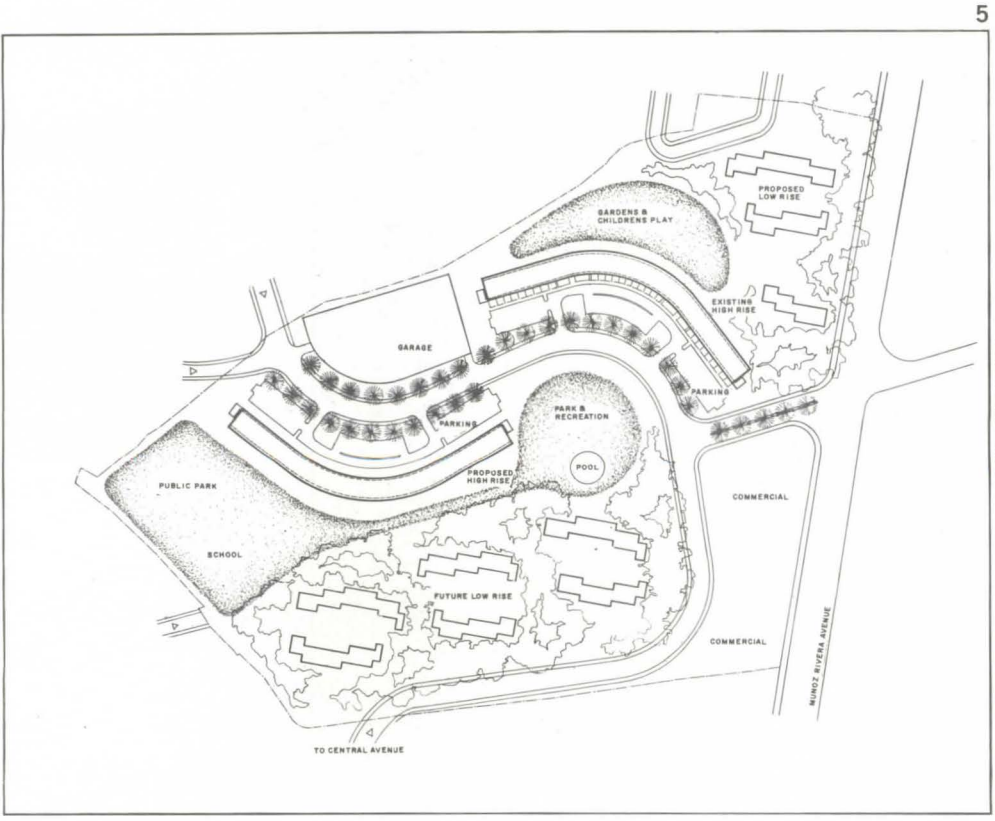


PHOTOS: EXCEPT AS NOTED: ALEXANDRE GEORGES

1

by James H. Scheuer, was the one selected, in spite of the fact that his bid for the land was lower than that of other competitors, and that he and his architects advocated a density lower than that stated by the zoning ordinance. The plan, chosen entirely on the basis of architectural merit, promised Puerto Rico its first well-planned contemporary community, with apartment buildings, townhouses, park areas, stores, and a school. Through-traffic was rerouted around the site, providing uninterrupted pedestrian access to park and school from most of the living units. The scale of the buildings was low, with three 9-story buildings only a little higher than the native palms. The typical apartment—a duplex with gallery access—provided through-ventilation, sun-lit kitchens, and a feeling that each apartment was "a house." Duplex bays in the apartment houses were identical with the townhouse bays, encouraging architectural continuity between high and low buildings (4). However, on completion of cost estimates and the consequent rent schedules, the program was drastically revised. The developer, with the concurrence of FHA, required that the apartment buildings be made 14 stories high and that the three structures be regrouped into two. Unfortunately, this unsettled the balance of high and low buildings, which had been such a strong point in the earlier plan, and also made it more difficult, if not impossible, to relate the new construction to the existing residential community (6). Though extremely disappointed and resisting the change strenuously, the architects prepared a second plan (5) in the belief that significant elements of the design—particularly the site

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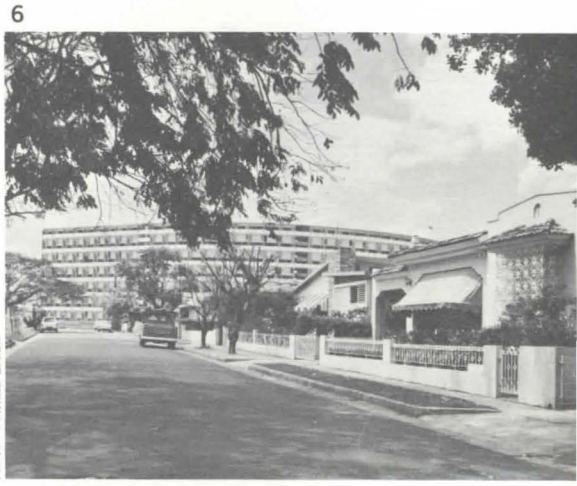
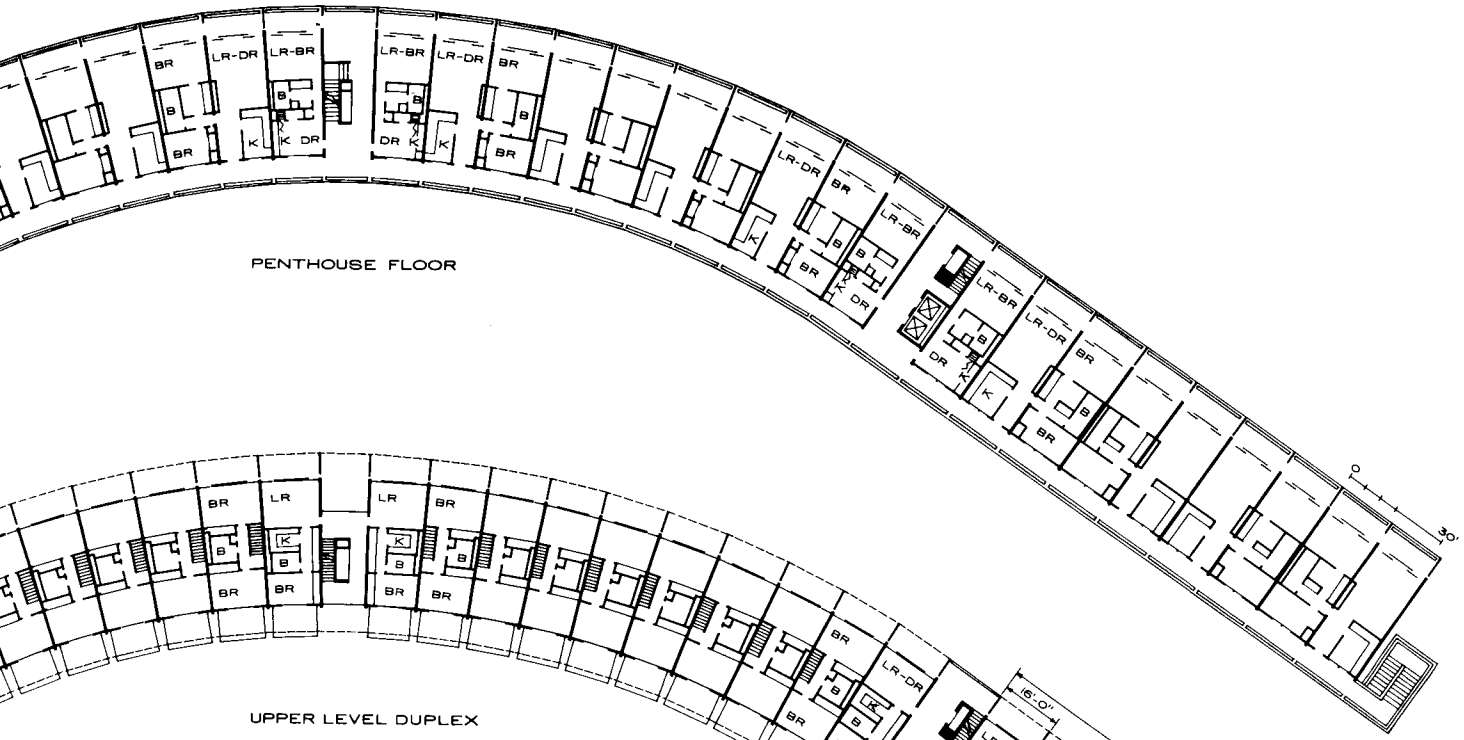
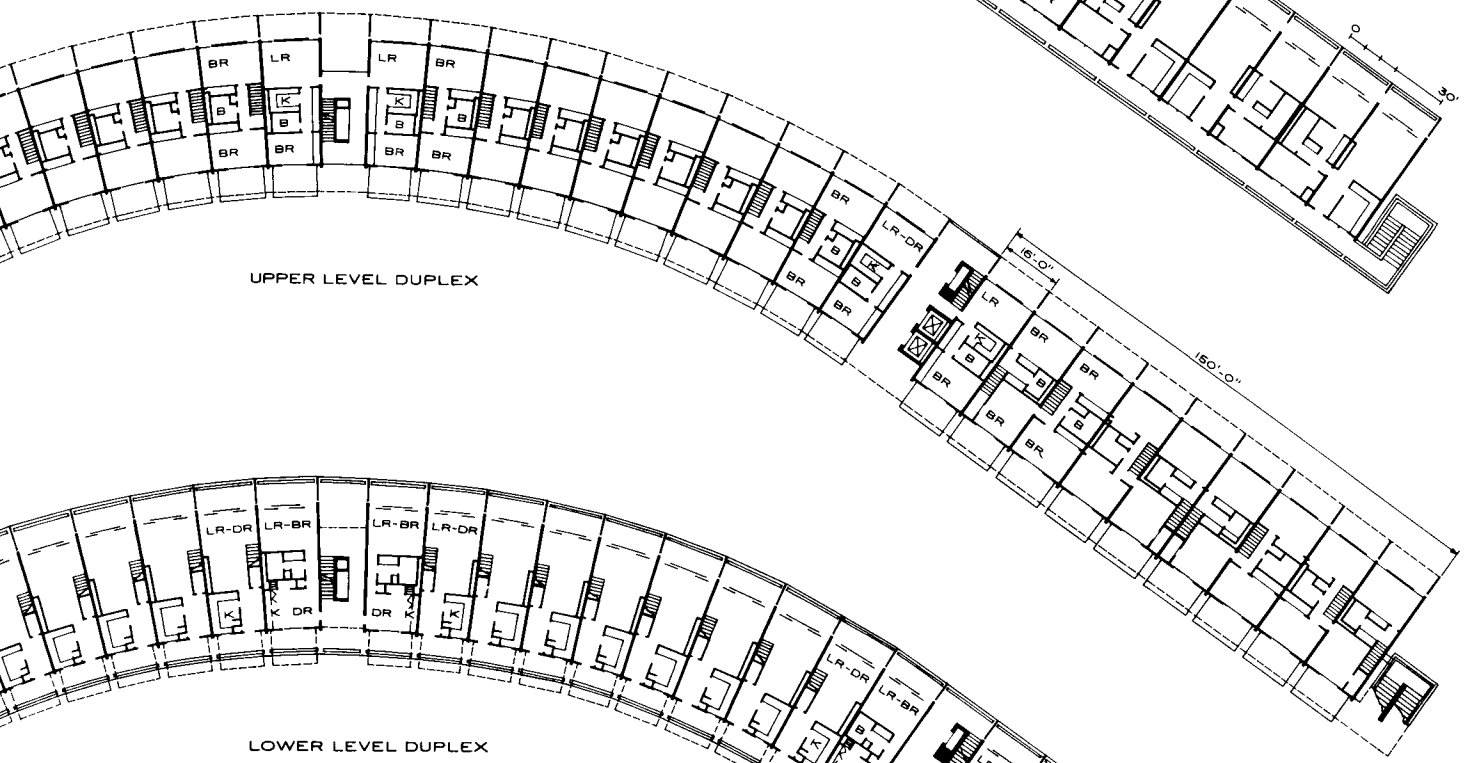
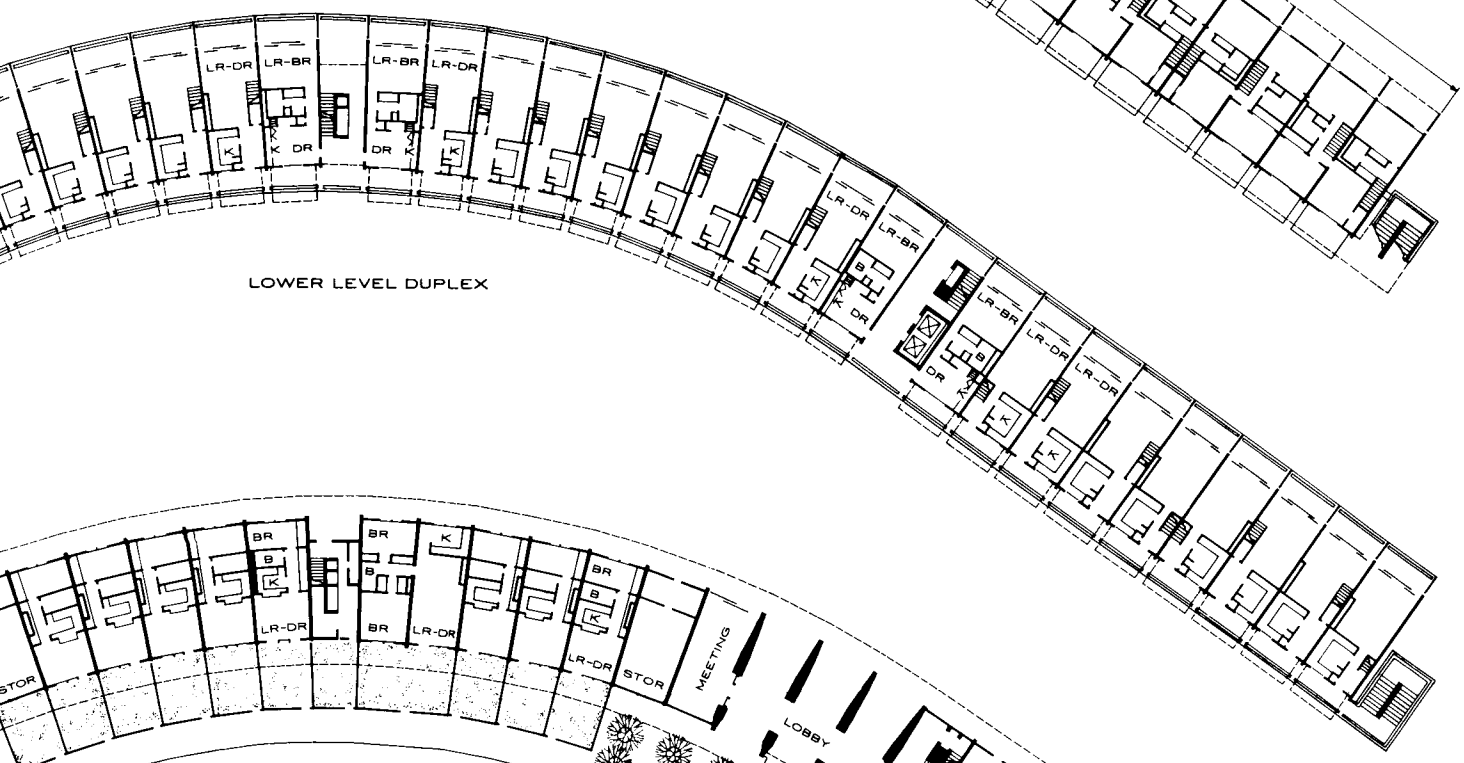
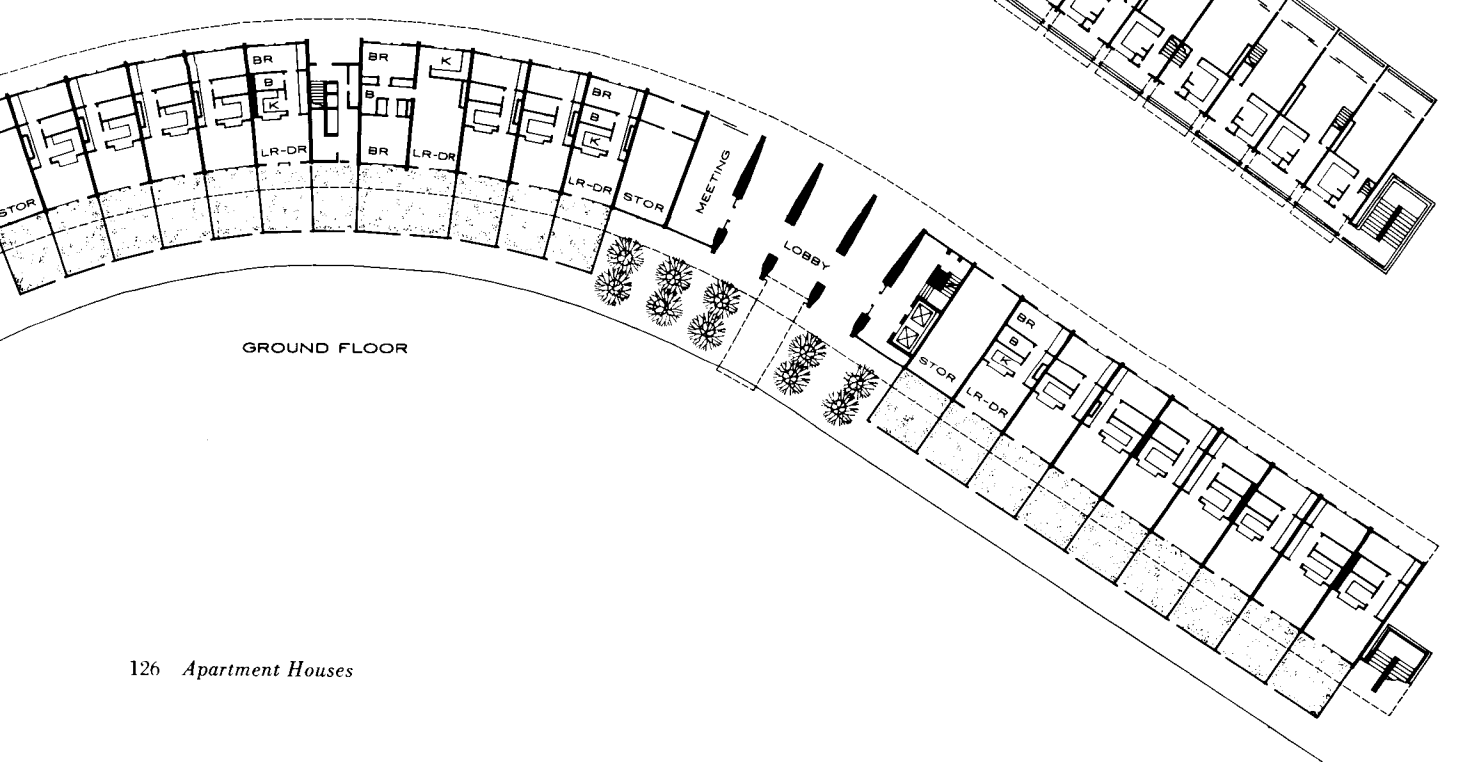


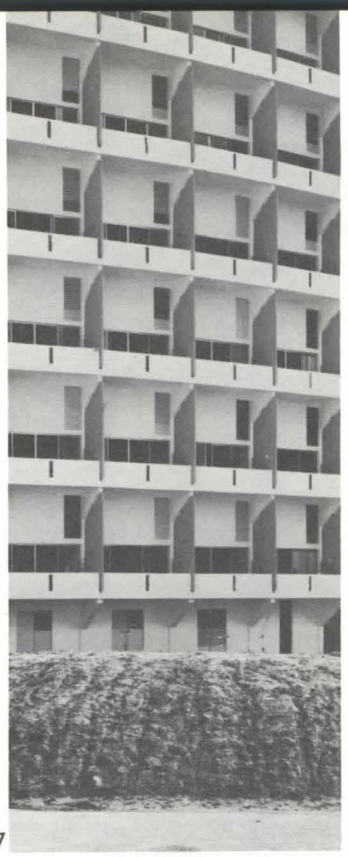
PHOTO: CONRAD EIGER


PENTHOUSE FLOOR
BR
LR-DR
LR-BR
B
K
DR
0
30'

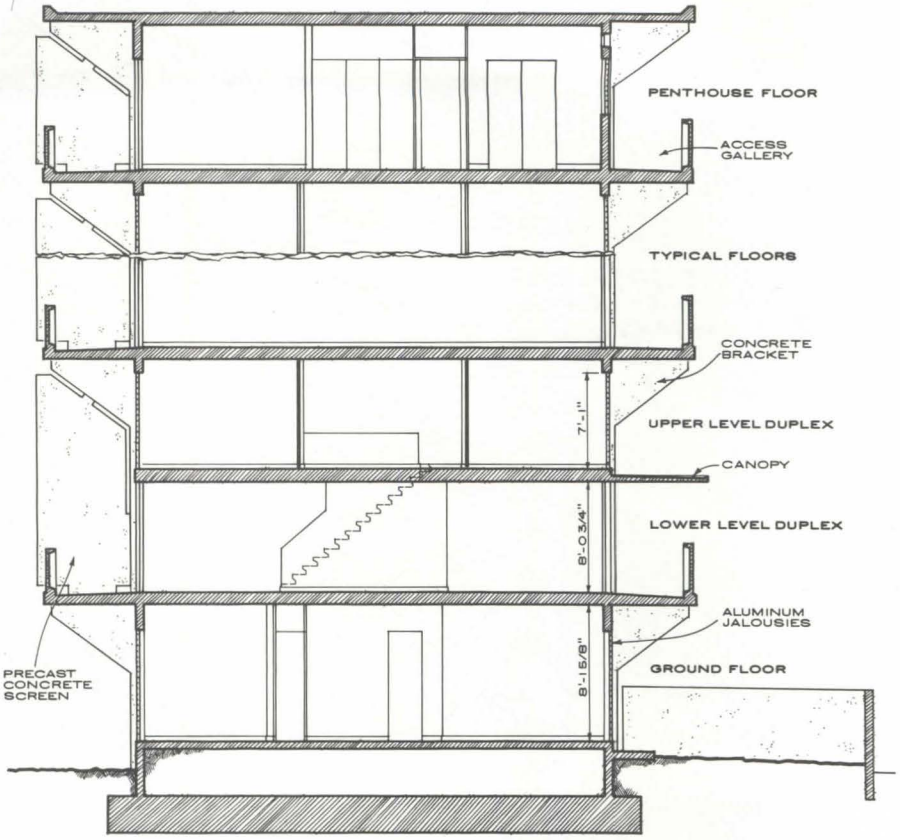

UPPER LEVEL DUPLEX
BR
LR
B
K
LR-DR
LR-BR
16'-0"
150'-0"


LOWER LEVEL DUPLEX
LR-DR
LR-BR
DR
K


GROUND FLOOR
BR
B
K
LR-DR
STOR
MEETING
LOBBY



7

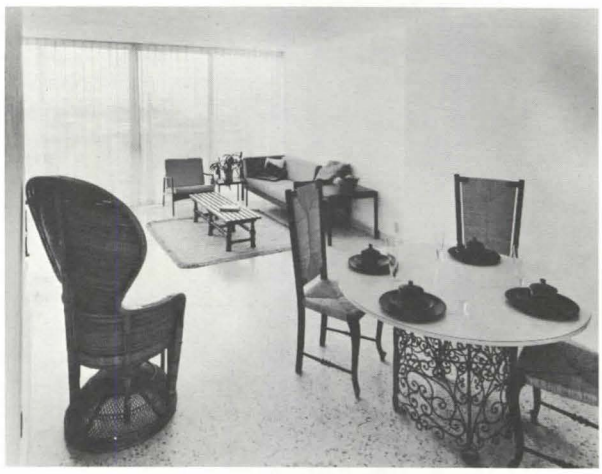


TYPICAL SECTION

All apartments—both duplex and flats—extend through the building from the convex ***(7)*** *to the concave façade* ***(8)****. Living rooms on the convex side take advantage of the curve of the building to widen their window walls, to capture the prevailing breezes, and to broaden the views toward the north, the city, and the ocean. At ground level, living rooms look onto private patio gardens.*

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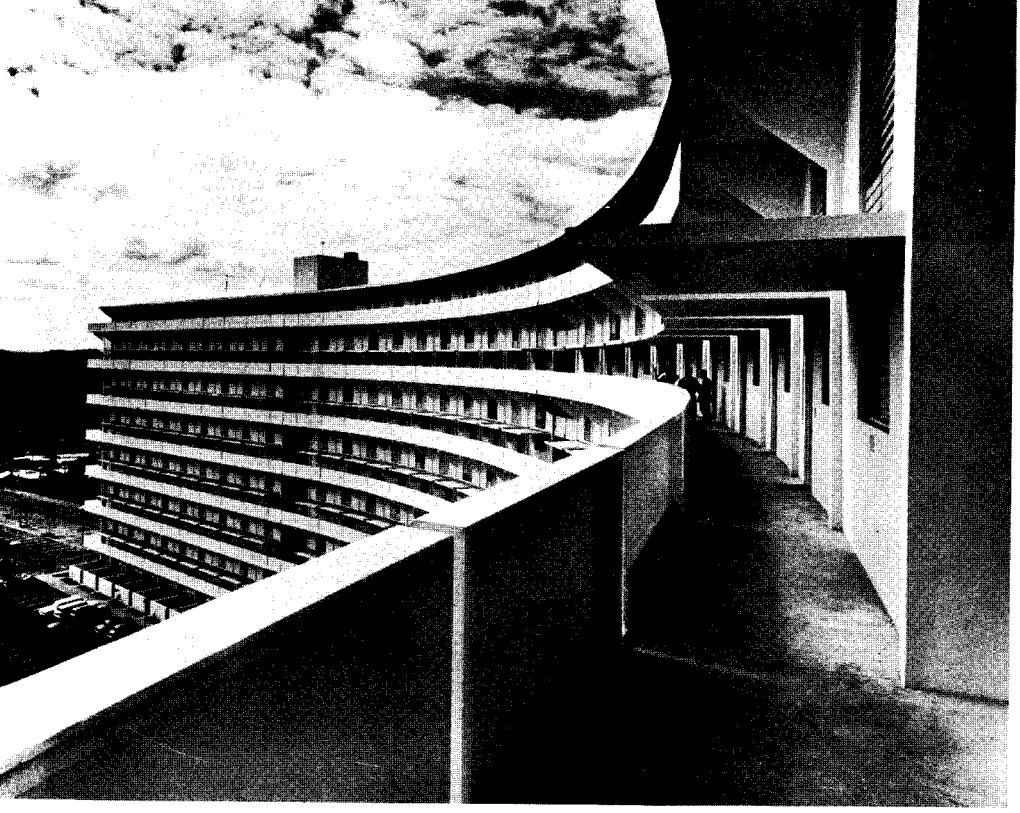




9

plan and the unit plan—could be preserved.

In the new site plan, the loop road still serves its function very effectively of providing uninterrupted pedestrian access to park, school, and stores. The most important element salvaged from the original scheme, however, is the apartment unit plan. This duplex unit remains substantially intact, except that the bay has become more elongated, with a reduction in width and a corresponding increase in the building's depth from the original 24 ft to the present 35 ft. All of the living rooms are placed along the convex north façade **(7)** to avoid direct sunlight and to catch the prevailing breezes. Double sliding doors in the living rooms **(9)**, low kitchen partitions, and jalousy windows on the concave access side **(8)** permit the air to flow freely through the apartments, making artificial cooling (though air-conditioning outlets are provided) unnecessary, except on the penthouse floor. Concrete canopies shade the front doors and the jalousied kitchen openings on the access side to the south. Floor-to-ceiling aluminum jalousies were also used on the upper bedroom floors to encourage through-ventilation. There are, in addition, many one-story flats, which had to be incorporated into the revised design at the request of FHA. These are located at ground



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Galleries ***(10)****, resembling elevated sidewalks, are located on alternate floors, where they provide access to the apartments, interconnect the five vertical circulation cores, and terminate in the two stairways* ***(12)*** *at the ends of the building. Each vertical circulation core occupies one standard structural bay, which, except for elevator or stair enclosure, is left open as a two-story breezeway. At the street level* ***(11)****, only the two bays containing the elevators are enclosed; the two main "lobbies" are open for ease of circulation and through-ventilation.*



12

level, around the stairwells, and at the penthouse level. With the incorporation of these additional smaller units, a corresponding increase in the number of car-parking spaces (FHA requires one car per apartment) was necessitated. To avoid turning the entire site into a parking lot for the tenants, the architects have recommended that a multistory parking garage be incorporated into the site plan.

Additional restrictions to which El Monte, as a Government-aided project, was subject, played an important role in the design of this building—so much so, that at an early point in the design, the building was, according to the architects, "a diagram with major dimensions fixed. The proportions of the windows, doors, rails, and balconies were the only flexible elements within this discipline." Maximum allowable distance between fire stairs, for example, determined the length of the building. FHA room count requirements determined the apartment width of 16 ft, and economics the choice of two elevator cores—to mention only a few.

However, within this very confining program, the architects have achieved a remarkably strong and individual architectural statement that goes far beyond the utilitarian solution. The introduction of the curvilinear form, for example, not only serves the practical purpose of giving stability to an otherwise long and thin structure, but, more importantly, provides varying perspectives, tends to minimize the building's great length, and gives to the access galleries **(10)** a dramatic sweep. The entry canopies are not only sunscreens and sound baffles, but they also contribute to the design interest inherent in the south façade **(11)**. And the exposed end stairways **(12, 13)**, while intended mainly as fire exits, are important visual elements that serve to give scale to this large building mass.

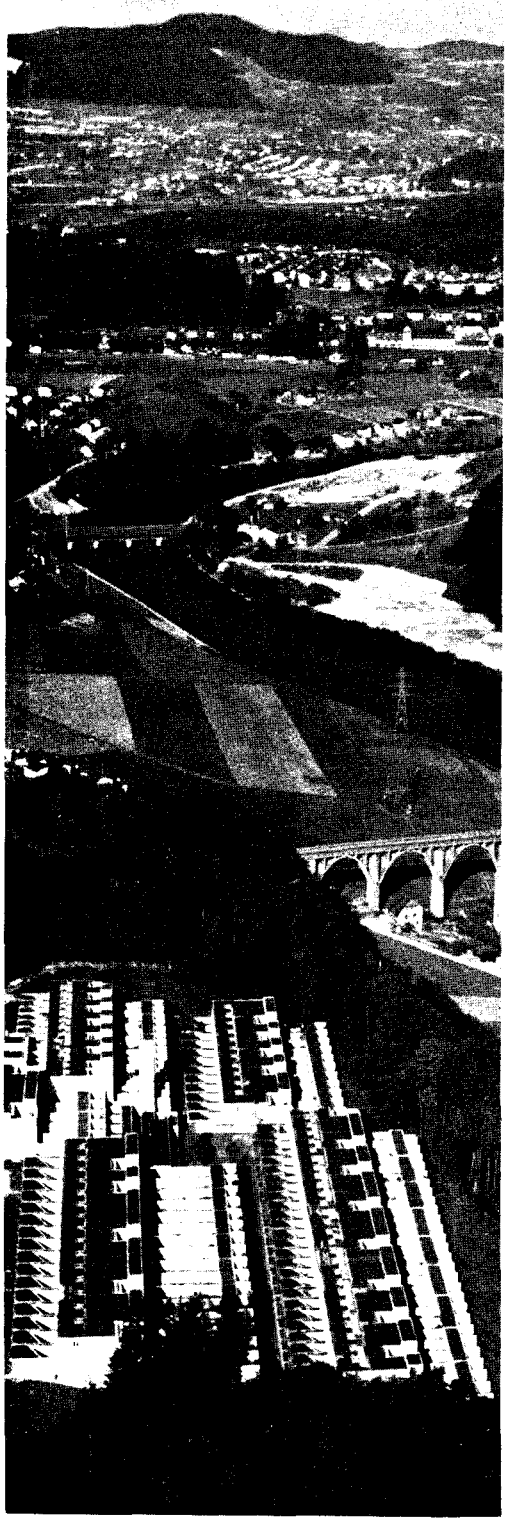
Concrete was used almost exclusively for the construction of this building. In the structural frame, vertical shear walls (8" thick and 16 ft on centers) extend the full height of the building. Floors are flat-slab construction. A heavy mat foundation of reinforced concrete supports the structure. Other parts, such as balcony rails and canopies, were precast. Even the interior materials are primarily concrete, in the form of cement plaster on concrete block and terrazzo floor tiles.

James H. Scheuer and H.R.H. Construction Corporation were the sponsors and developers; Martinez & Costa and Farkas & Barron, Structural Engineers; Francisco Viscal, Electrical Engineer; Francisco Rodriguez Olivieri, Mechanical Engineer; H. R. H., General Contractor.

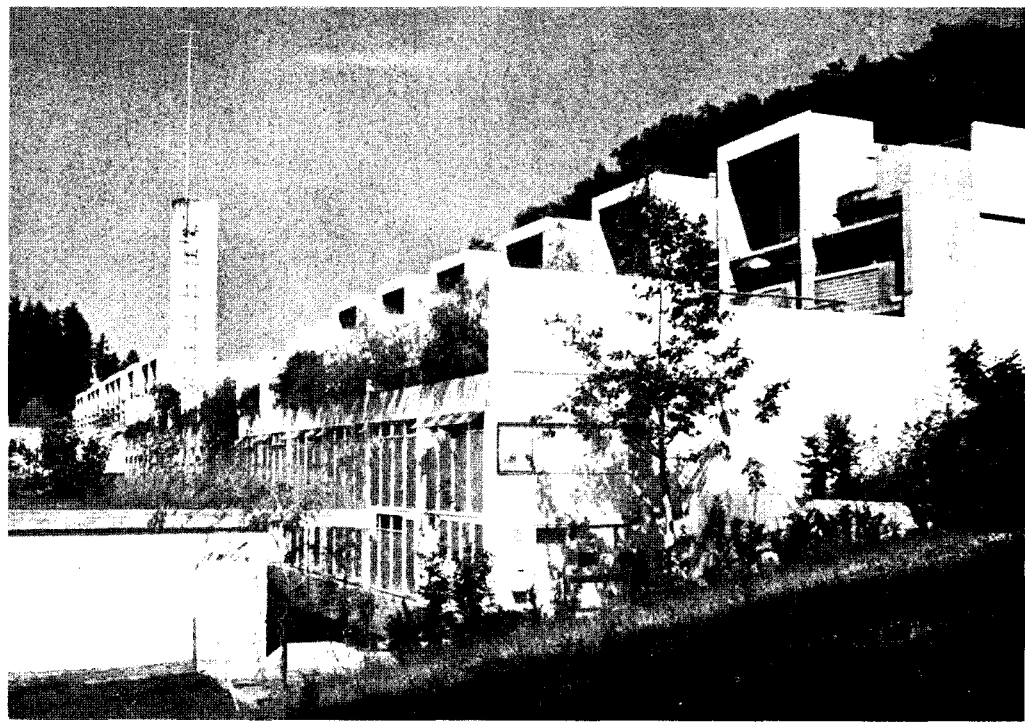


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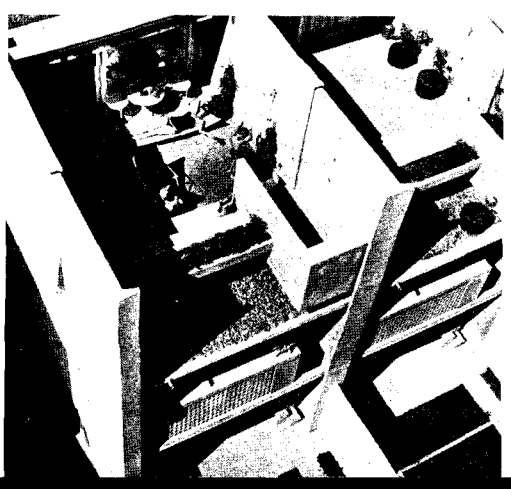
SEARCH FOR CONTINUITY IN THE LIVING ENVIRONMENT

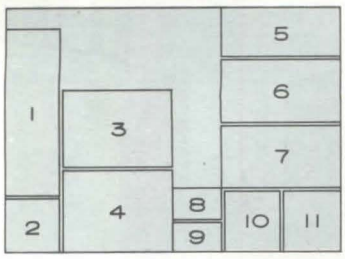


Some critics feel that the traditional central city, or indeed any compact plan, is obsolete as a design practicable for modern life, and that the future lies in the "dispersed sheet"—a convenient concept, though extremely detrimental in terms of architectural cohesion and land preservation. It is encouraging to note, however, that efforts are being made—and not only on paper—to counteract this trend. The examples cited here do prove that it is possible to resolve architecturally the old with the new, the high with the low, and even the scale of the automobile with that of the pedestrian, without resorting to "dispersed" planning. The most successful instances of this type of approach have until now been confined to Europe. This is not to say that American architects have not applied themselves in this search for continuity. On the contrary, many have pioneered in this field, but disappointingly few have succeeded in crossing the usual hurdles to see their plans implemented.









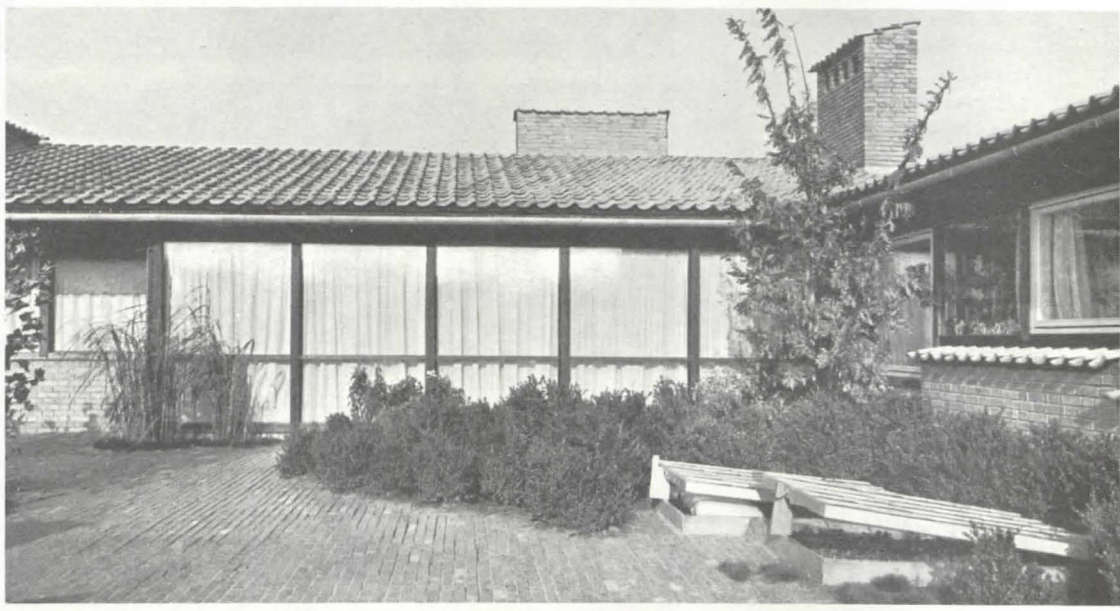
Halen, near Berne, Switzerland, represents one of the most significant efforts at establishing "continuity in the living environment." It is a compact village ***(1)****, set in the midst of the countryside. The individual unit, repeated with minor variations, is a three-story house* ***(2)*** *with garden and stepped terraces. Assembled in rows* ***(3)****, these houses define the village square* ***(4)****. Halen's architects, Atelier 5, have solved a number of planning problems: the village is compact, but individual families have complete privacy; repetition of houses, alike in form and material, does not result in monotony but produces architectural continuity and homogeneity; automobiles are being stored under the houses, out of sight.*

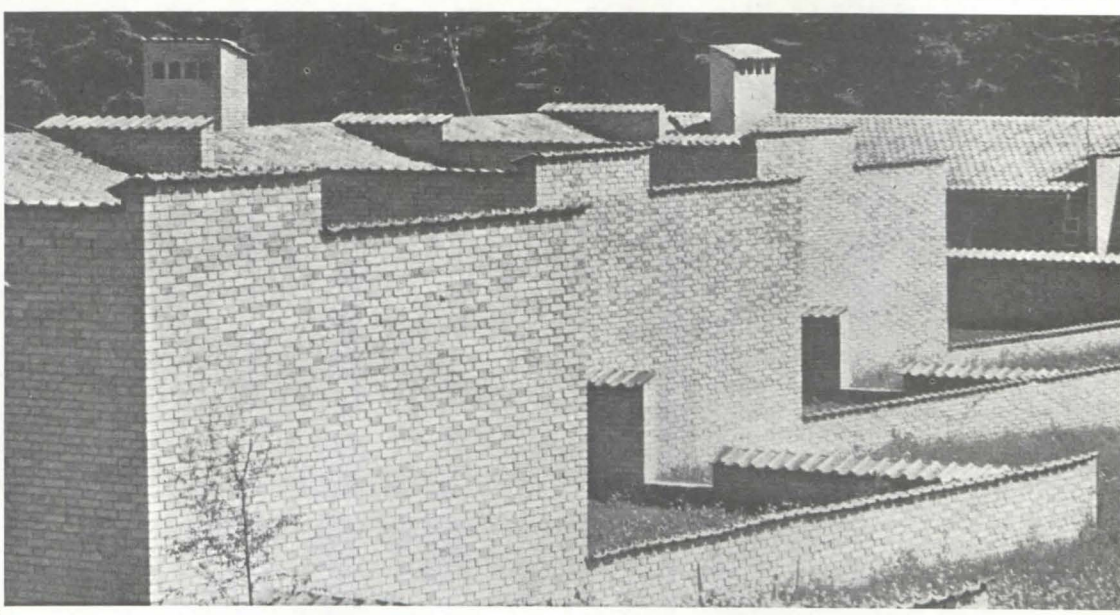
In another Swiss example, the terrace houses of Zug ***(5)****, Architects Stucky & Meuli have managed, with the aid of unusually far-sighted civic authorities, to create a contemporary living environment on a difficult site.*

In Jörn Utzon's little village near Helsingör in Denmark, the unit is the square atrium house ***(6)****, which lends itself admirably to various groupings and contours* ***(7)****. Again, one material and one basic form, imaginatively repeated, achieves architectural continuity.*

In England, some of this same quality have been evoked in an old section of London ***(8, 9)****. Here the London County Council has wisely abstained from demolition in favor of modernization. Elsewhere in London, Denys Lasdun and Partners have achieved remarkable continuity between their new apartment house and an imposing old structure of Palladian style* ***(10)****, and London town houses* ***(11)****.*





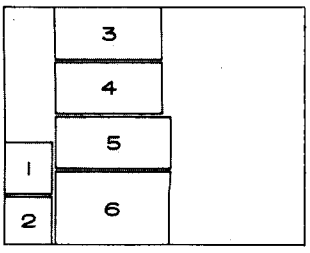










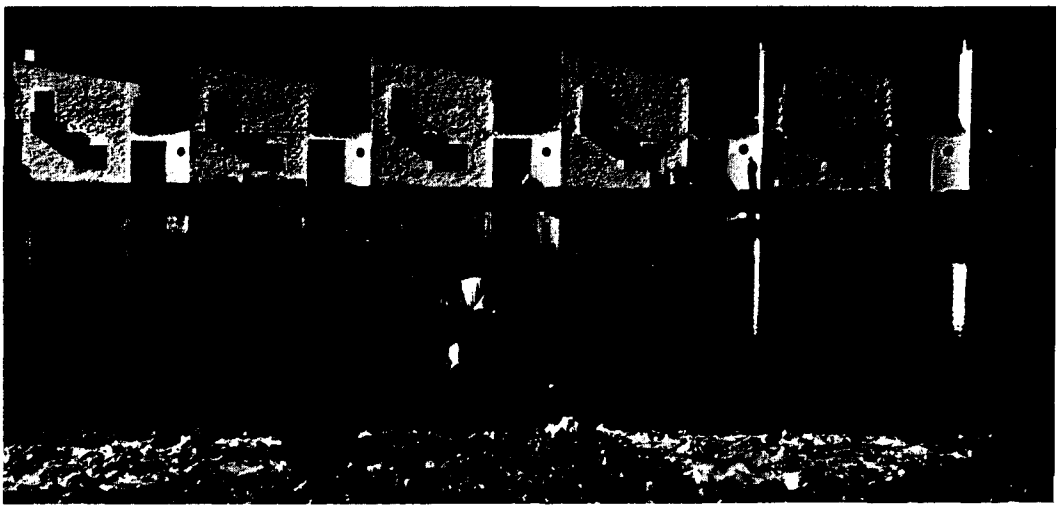


Spanish architects have, in recent years, shown much ingenuity and skill in reinterpreting their traditionally compact urban towns in contemporary terms. Thus, a street in the town of Caño Roto ***(1)*** *near Madrid, designed by José Luis Iniguez de Onzono and Antonio Vasquez de Castro, has much of the character of the typical Spanish street* ***(2)*** *without being a copy of the old. Elsewhere in the new town, the architects demonstrate their skill in composing buildings of varying heights* ***(6)****.*

In Batan ***(3)****, a suburb of Madrid, irregular contours gave rise to this plan by Francisco Javier Saenz de Ciza, José Luis Romany, and Manuel Sierra, in which the street system, many fine existing trees, and new apartment houses are effectively composed as one continuous entity.*

The modern farming community of Vegaviana ***(4, 5)****, designed by José Luis Fernandez del Amo, dramatically recalls mediaeval communities of this type, which possessed those qualities of architectural totality so sought-after today.*

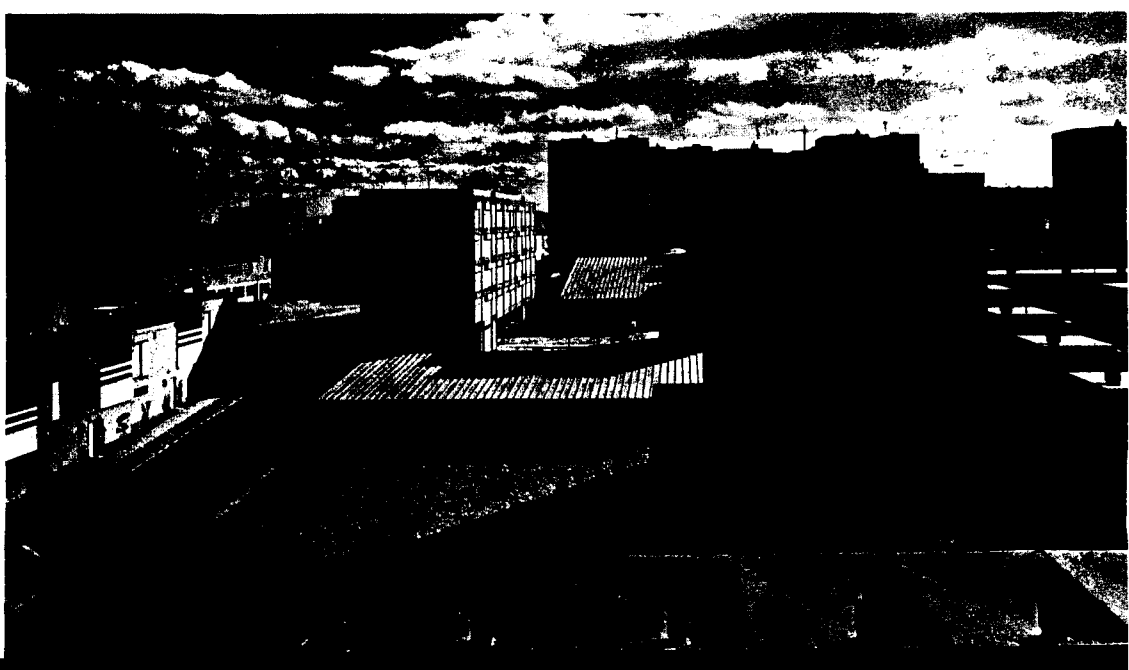


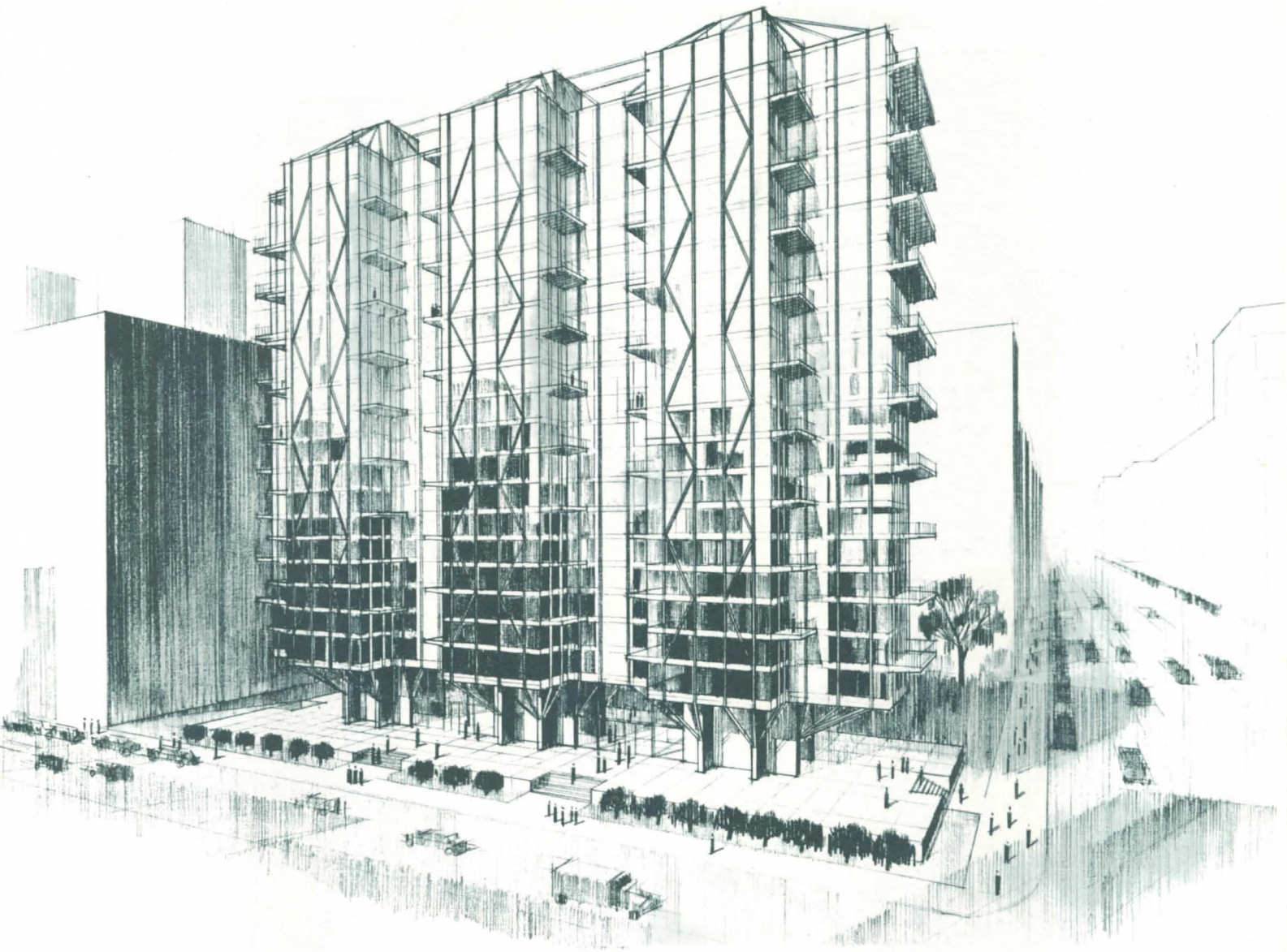












VARIETY WITH PREFABRICATION

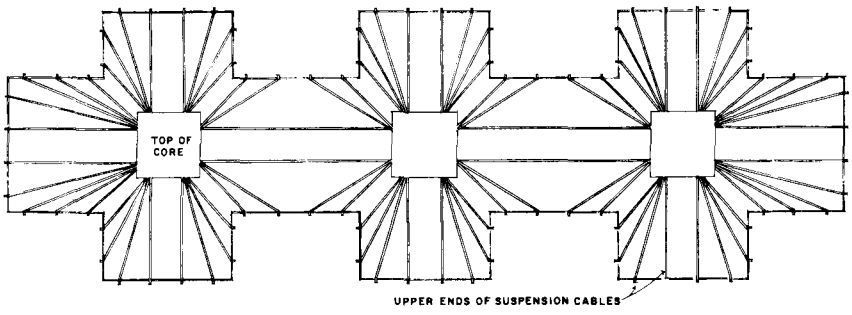
BY EDWARD T. SHIFFER

This proposed apartment-house, designed by the author, represents a fully mass-produced dwelling unit erected with a minimum of site labor. Each component is designed to fit a basic 10-ft module, or some even fraction thereof, and can be combined in a variety of plans and building heights and volumes. The author, a New York architect, has travelled extensively in both Europe and the United States studying the industrialization of building.

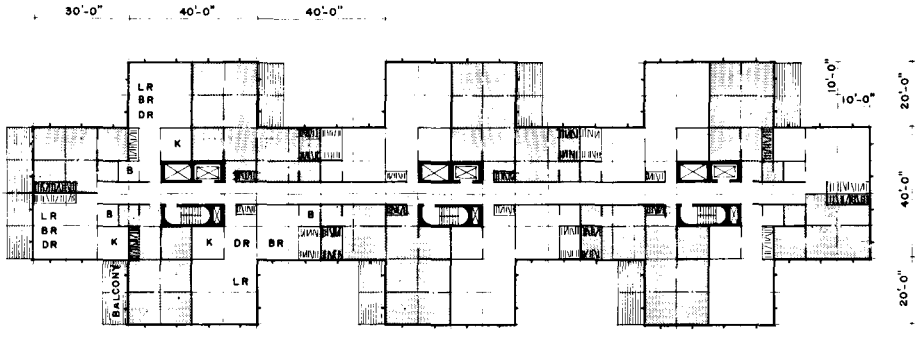
The construction industry is moving steadily toward industrialization. Apartment houses, with their repetition of similar-sized spaces and the large volume of demand, are a fair subject for mass production, as much European work has already demonstrated. Today's manually-constructed apartment house, made up of small units capable of flexible use, already possesses a much-warned-against evil of industrialization—sameness. Through fear of departing from the tried, the builder offers the apartment dweller little choice, presenting the whole building as a standardized product without gaining from it, however, the great benefits of mass production: low cost and precision.

The building industry lacks willingness to tackle this problem by investing in the large machines and the trained men necessary to factory-produce larger units. It prefers to ride out business fluctuations with low-investment, in-hand processes and a union-trained labor pool that is paid only when there is work.

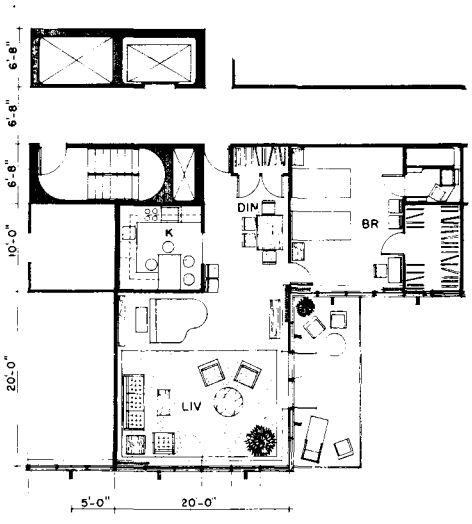
In the transitional phase to mass production, and in order to minimize the effect of business fluctuations, these larger units should be made by using existing facilities and readily-available, inexpensive materials such as concrete, which is strong, fireproof, sound-resistant, and requires minimum processing. In this way, the existing building industry would become immediately involved and the expensive growth to more sophisticated materials could take place gradually.



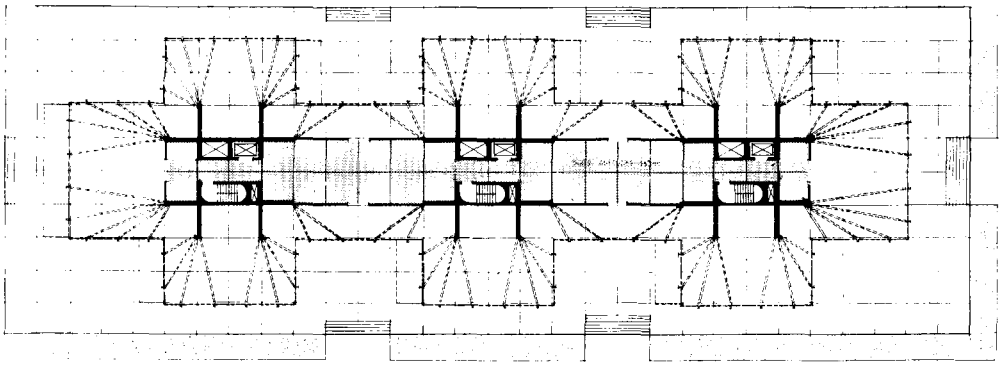
ROOF PLAN



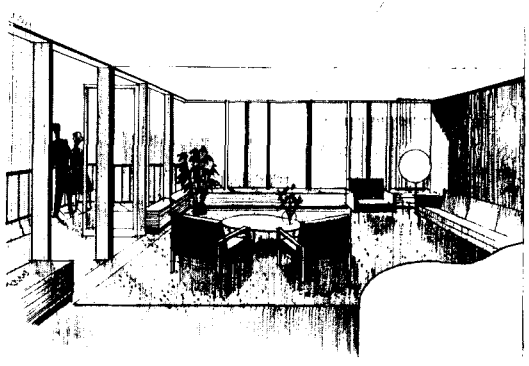
TYPICAL FLOOR PLAN



TYPICAL APARTMENT PLAN



GROUND PLAN



Although mass production involves greater overhead costs, investment in operational facilities, and the need to maintain a volume, it also provides the essential means through which to achieve the great savings inherent in mass purchasing, specialization of labor, use of machine power, and speedy erection of buildings. By applying mass-production techniques to the production of larger units, capable of being assembled quickly in many different forms, variety and flexibility of building form would be reintroduced into mass housing and costs would go down. A variety of forms, plans, and materials, within a framework, expressive of the cell-like and taut nature of the building, would result. "Maisonettes," skip-stop elevators, exterior corridors, and other variations would be possible. The apartment buyer might be able to lay out his own space, change it easily, and even add a bathroom or kitchen as his needs change. The benefits of standardization would be taken into account before the design of the individual building—not after.

No amount of stylistic trickery is going to change the mass nature of housing. The problem is to use the machine as a tool guided by human values to give variety between buildings, flexibility and spaciousness within the dwelling unit, and a series of forms that have an excitement and expressiveness growing out of their new precision and lightness.

The Problem

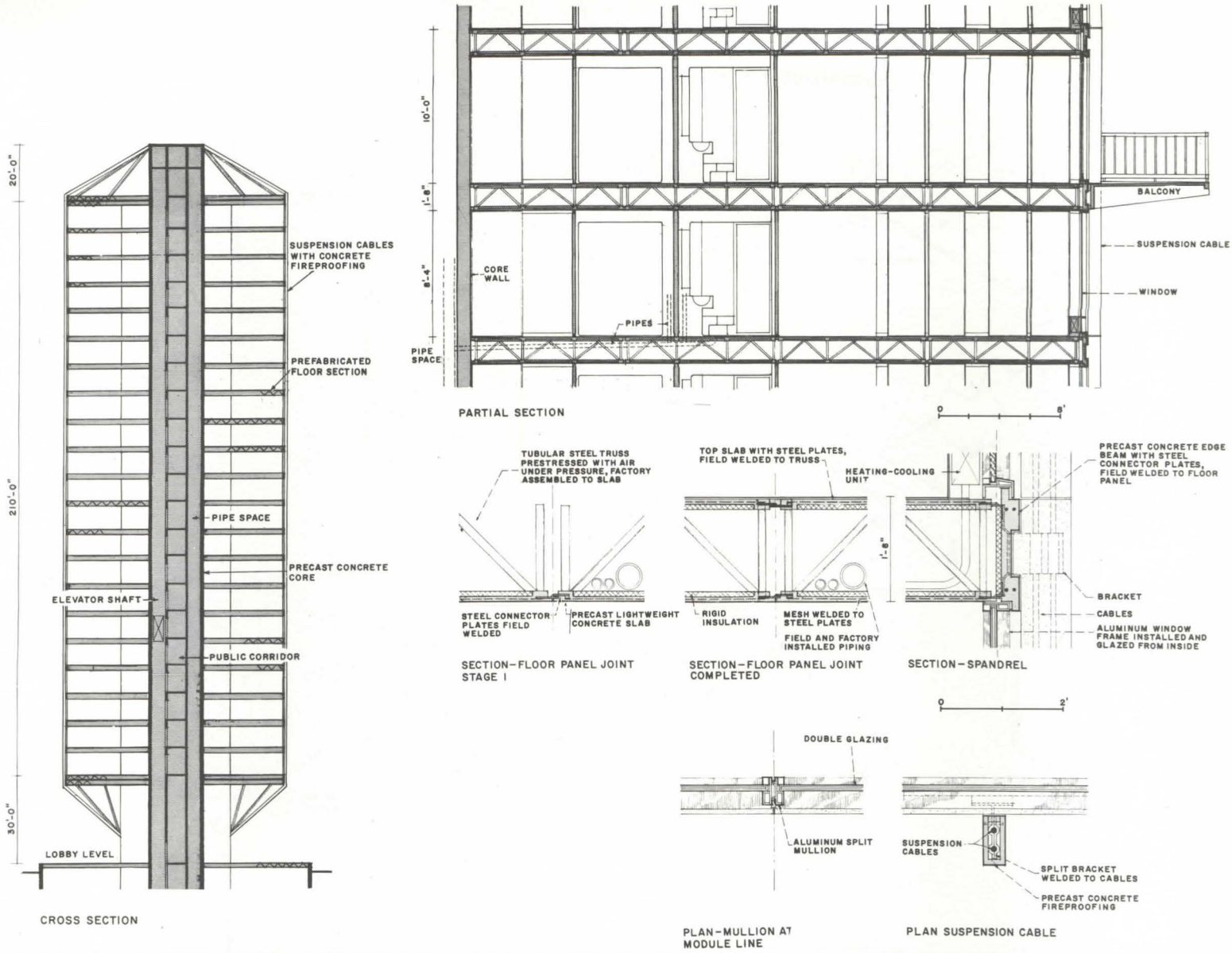
The problem the designer posed to himself was to create a system of building high-rise apartment houses having the following characteristics: low cost achieved by cutting site labor and construction time to a minimum and by maximum use of machine labor; limited number of standard, mass-produced components; lightweight and fireproof building materials now available; maximum flexibility in plan, mass, and elevation; expression of the new way of building.

Design of the Structure

The building would be formed with a central core, which is the inner support for the floors and supports as well the cables that hold up the outer edges of the floors.

Core: Encloses stairs and elevators; contains vertical piping, wiring, and ducts; forms the main compression member and major lateral stability element. Since the need for all of these services increases in proportion to the building height, a unit that contains one stair, one elevator, and shaft space would serve for a building of a certain height, while the addition of one or more of these units would allow additional, completely serviced stories to be erected. In this way, double use would also be made of the normally nonstructural stair, utility, and elevator-shaft walls.

The units forming the core are shown as precast-concrete sections, 6'-8"x6'-8"x 10'-0". They would be stacked by crane, and fastened either by leveling with bolts and welding connector plates, or by vertical prestressing. The latter process would demand great accuracy in precast-



ing, but would offer the possibility of adjusting the prestress to take unequal loads on either side of the core, and carry unsymmetrical buildings with equal stresses. The top section of the core would be reinforced to take the cable pull; the bottom section would be widened with precast fins to provide greater lateral force resistance at the base.

Cables: With a high-strength steel cable in tension, not much material is needed to carry the load of the apartment house. Two or three sizes of cable would be sufficient to resist the range of loads encountered without significant waste. If columns in compression were used instead, a large number of different types would be required to avoid waste. Thus, the compressive stresses would be confined to the core, a member that must be enlarged for higher buildings in any case, and the other vertical supports would be highly-stressed thin cables.

The cables would be doubled as a precaution against undiscovered defects or accidental severing. Welding to clips, or bolted connections to the floors, would be used.

Floors: A combination of structural floor, utilities space, and finished ceiling forms the floor unit. The top and bottom planes are thin, reinforced-concrete, ribbed plates, 10′-0″ square, with a tubular steel, two-way truss system separating them by 1′-8″. The tubes might be prestressed with air inflation.

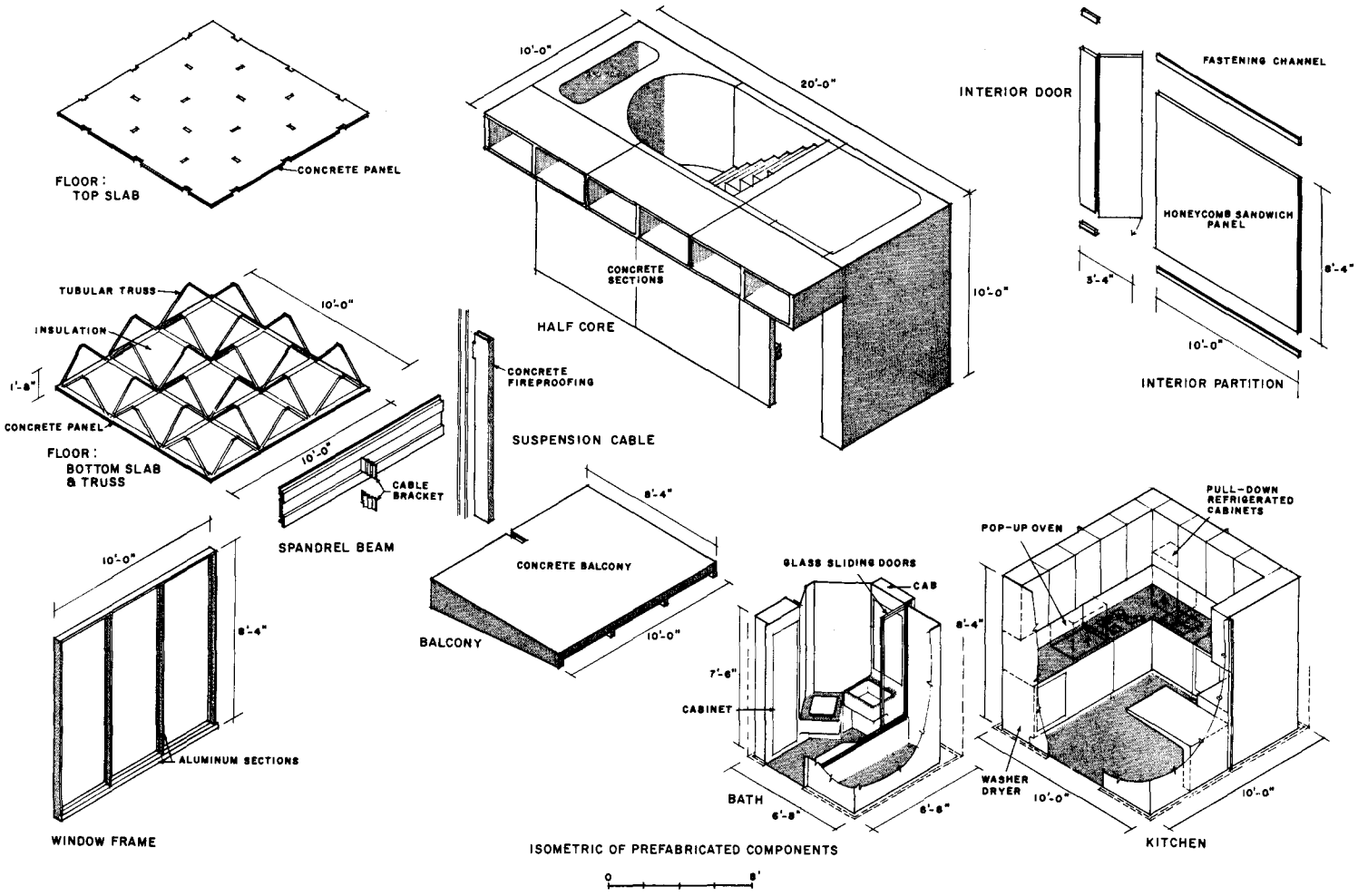
In the factory, the bottom plate and trusses would be cast together. Adjoining bottom plates and factory-installed utilities would be field welded. The top plate would then be placed on, and connected to, the tubular trussing and adjoining top plates by welding from above. Horizontal prestressing is also a possible means of connecting adjoining plates. The result is a continuous two-way space structure estimated to be capable of 40′- to 60′-spans with varying patterns of support. Welding or prestressing would hold the inner units to the core, while a welded-on, precast-concrete edge beam would concentrate each 10′-wide panel load on a suspension cable at the outer edge.

Architectural Considerations

Module: A 10′-0″ structural planning module would be used, with cables 10′-0″ on centers and floor units 10′-0″ square. This would give all units a maximum dimension of 10′-0″. A 3′-4″ space-planning module would be used: 3′-4″ minus partition thickness makes an interior corridor or a closet depth; 6′-8″ minus a partition thickness makes a public-corridor, an exit-stair, or an elevator-shaft depth; a 6′-8″ square contains a compact bathroom; a 10′-0″ square contains a compact kitchen; 13′-4″, 16′-8″, and 20′-0″ make usable room widths.

A 10′-0″ floor-to-floor height is in excess of that found in usual practice, but this allows an 8′-4″ ceiling height and a 1′-8″ structural and utilities depth, permitting central air conditioning and the flexibility that long spans provide.

Lower story heights are definitely desirable and certainly much more economical. Any further development of this



design would definitely involve research to cut a foot or more off the story height, while still maintaining planning flexibility and space for distribution of horizontal utilities.

All dimensions are divisible by 4" basic international module.

Over-all character: Large rhythms of large components predominate within an ordered series of proportions based on the dimensions of the useful spaces. The massing is climactic, related to the supporting central core, and expresses the living spaces within. On the façades, the thin supporting members show tautness of the tensile forces of the structure, like the rigging of a sailboat. A thin, sharp plasticity of surface results from the structural needs. Liveliness and warmth come from the balcony shadows and railings.

Nonstructural materials: Exterior walls are shown as a combination of story-height aluminum windows and solid-concrete wall panels. Variations on this are possible and desirable. Interior partitions would be light-honeycomb panels, with double partitions between units for sound insulation. Plastic flooring could be laid directly over the smooth concrete floor slab.

Bathrooms and kitchens would be made as a totally prefabricated inner liner for the standard partition panels. They would be shipped with flanged sections and bolted together in place. Kitchens would be of veneer or laminated plastic on light-weight cores. Bathrooms would be of plastic or sound-deadened metal. All appliances and piping would be complete in the units for field hookup.

Utilities

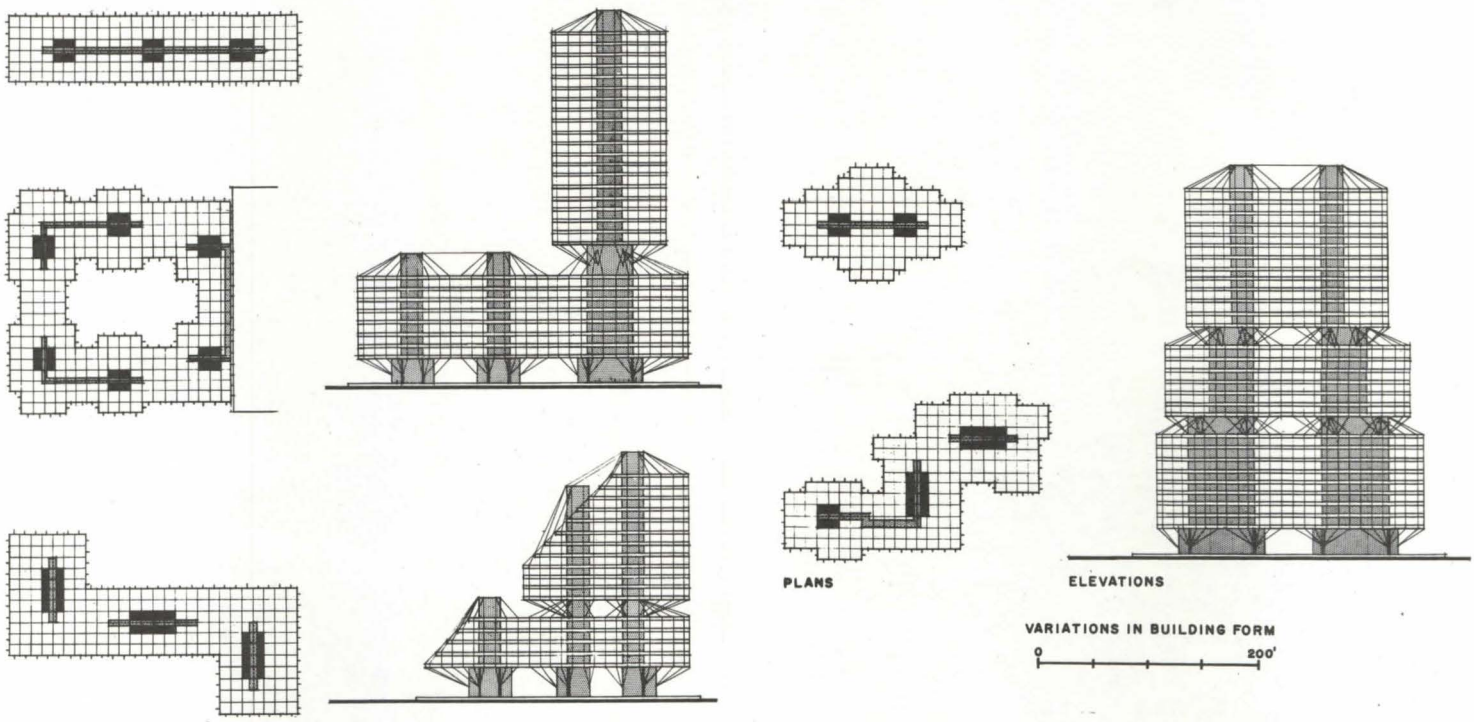
Pipe, conduit, and duct risers would be factory-installed in the core shaft spaces and joined when the core sections are stacked. Horizontal runs would be factory-installed on the bottom plate of the floor unit, and joined to the core and adjacent floor units before the top plate is welded on. Access to pipes, for repairs and changes, would be through the floor plate in each 10′ square panel. A continuous heating-cooling unit would encircle the perimeter of the building.

Erection

Erection would be powered principally by means of a climbing crane mounted on the cores. The cores would be stacked, top and bottom floors installed, and the cables strung. Several intermediate floors would be assembled on the bottom floor and lifted to form platforms, upon which assembly of the remaining floors could be made simultaneously at several heights in the building. When the floors have been lifted and fastened, interior partitions, exterior walls, bathrooms, and kitchens would be raised and set in place.

Further Development

It must be emphasized that the design shown is more a collection of ideas that provide a starting point, rather than a completed design for an actual building system. The character of this design points toward large-scale use in an urban



environment. Mass production is essential if the goal of reduced site labor, and the consequent drastic reduction in cost, is to be achieved.

Four problems immediately present themselves. The first problem is that of financing and marketing. The smaller the original investment, the easier it is to build up gradually to a substantial volume of production, as the real worth of the product is realized. Using the existing facilities of a precaster presently in business would limit the initial commitment for the structure. The ability to use products and processes presently available would play an important role in the design of all elements. Exposure to the public for a sufficient time is the major goal. If this design really hits the mark, then production will proceed at full speed. If it does not, it goes into a graveyard already filled with building schemes.

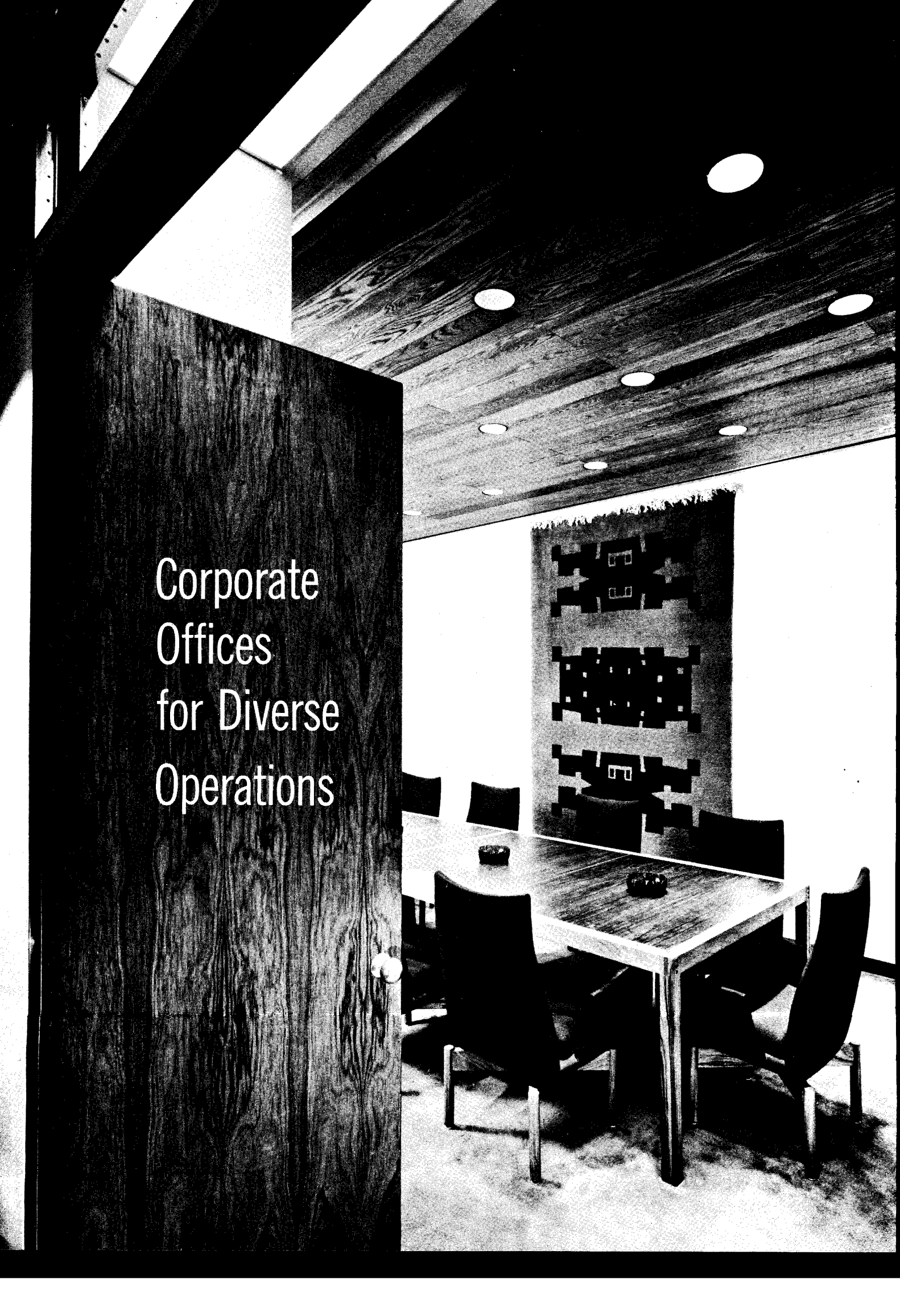
The second problem is Federal Government acceptance, since the Government plays such a large role in the financing of housing. At the moment, the HHFA is quite active in the experimental housing field, and ready acceptance and backing of projects of demonstrated worth is to be expected.

Third is the question of building codes. The urban character of the scheme dictates construction in areas with strong codes. Financing of tests, appeal, and revision procedures must be considered a part of the development cost in all localities. Concentration on one likely pilot area for the initial break-through seems advisable.

The problem presented by unions is the fourth question, one that has posed difficulties for previous industrialization schemes both in Europe and the United States. Since only an extension of recognized structural techniques is called for, trouble is not to be expected in that area. More resistance to industrialization is anticipated from the mechanical trades. Involvement of the unions early in the design phase, and use of building-trade unions in the factory, are two possible steps toward solving the problem.

From the preliminary design as presented, the subsequent steps in the process would be as follows:

1. Preliminary structural design to establish member sizes and range of heights and spans.
2. Analysis of the numbers and types of components in order to reduce variation to a minimum. Final design of the components.
3. Analysis of all types of plans and massing possible with the given components.
4. Model and mock-up studies of design and erection.
5. Complete cost analysis to determine "break even" point, when production costs are written off.
6. Analysis of code and union problems to ease acceptance.
7. Design of a production and marketing process in co-operation with producers of components, contractors, and unions.
8. Production of a pilot model.
9. Full production on an order basis


Corporate
Offices
for Diverse
Operations

OFFICES OF MARITIME OVERSEAS CORPORATION • NEW YORK, NEW YORK • DESIGNS FOR BUSINESS, INTERIOR DESIGNERS • GERALD LUSS, DIRECTOR OF DESIGN

For over 15 years, Designs For Business has been one of the largest and most successful of the independent office design firms—successful in that they have consistently maintained a high level of performance. Their custom designs of movable partitions (JULY 1961 P/A) and metal case furniture have influenced manufacturers' standard lines; their work has also drawn the attention of architects to a wide variety of fine sources. On these pages is an exemplar of DFB's latest work.

The office space for Maritime houses eight subsidiaries of a corporation whose activities range from a large shipping operation to a branch of the Israeli Discount Bank. Because of the diverse natures of the subsidiaries, a single image was established for the entire corporation. A single image was deemed advisable also because it would allow for the changing space requirements of each subsidiary. That image is a combination of two visual effects: an industrialized, almost spartan efficiency, and a warm, nearly residential sumptuousness.

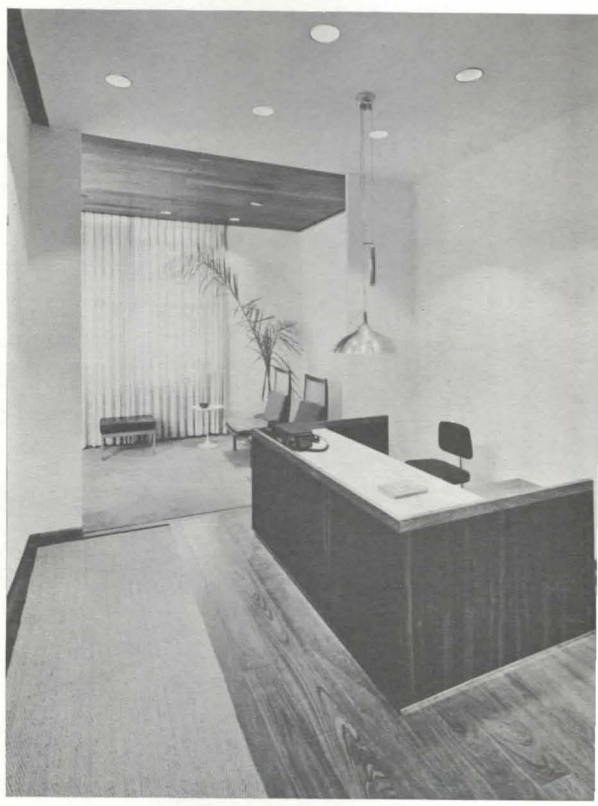
The doorways throughout, for instance, typify the industrialized effect (*p. 141*): jambs are aluminum with exposed phillips screws; most doors are of teak with a milk-glass panel set in aluminum channels. The conference room (*facing page*) epitomizes the richer polarity with its deeply grained woods and patterned woven wall hangings.

Normally, each of these effects has a more direct relationship to one room function than to another—that is, one might expect the reception-waiting room (*right*) to be more residential in appearance and the general office to be more spartan. In this design, however, the emphasis is sometimes placed on the unexpected polarity. The president's office, for instance, has a spartan appearance, (*p. 143*) and the general office looks more than usually luxurious (*overleaf*).

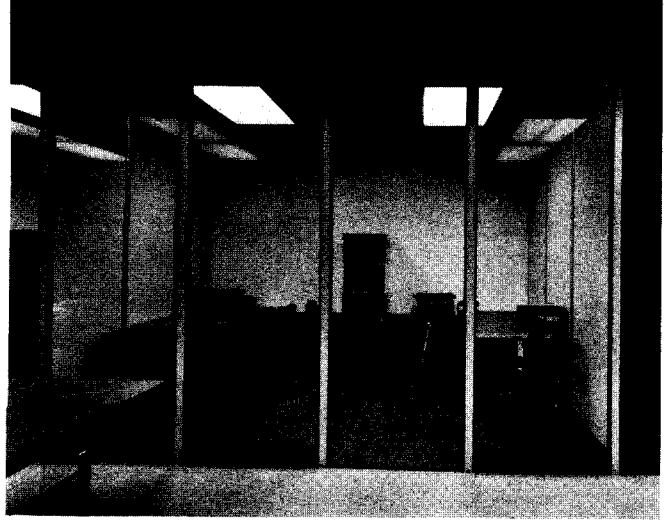
DFB sees the scheme as having a consistency that evolved from the desire to use a variety of materials in such a way as to make them all appear equally elegant. Even the materials ordinarily associated with industrial effects have an elegance that is the result, primarily, of refinement. DFB has been notably effective here in using a handsome line of metal case furniture, as in the vice-president's office (*below*) and the general offices. DFB feels that the diversity of the corporation has been synthesized into an appropriate design image for Maritime.



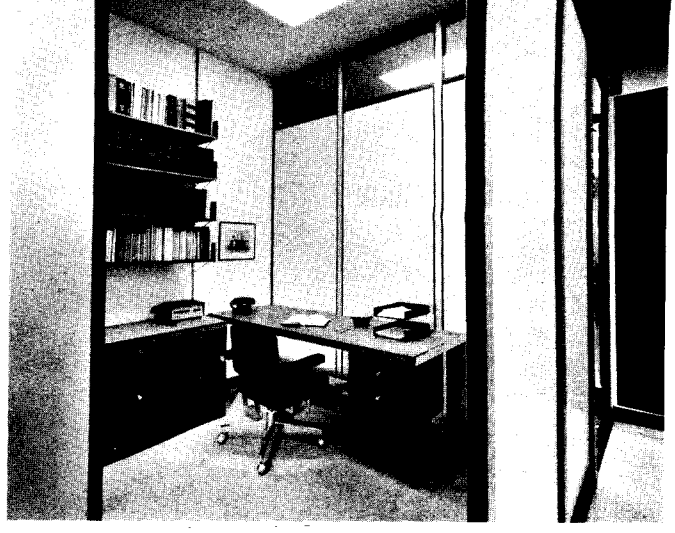
PHOTOS: LOUIS REENS





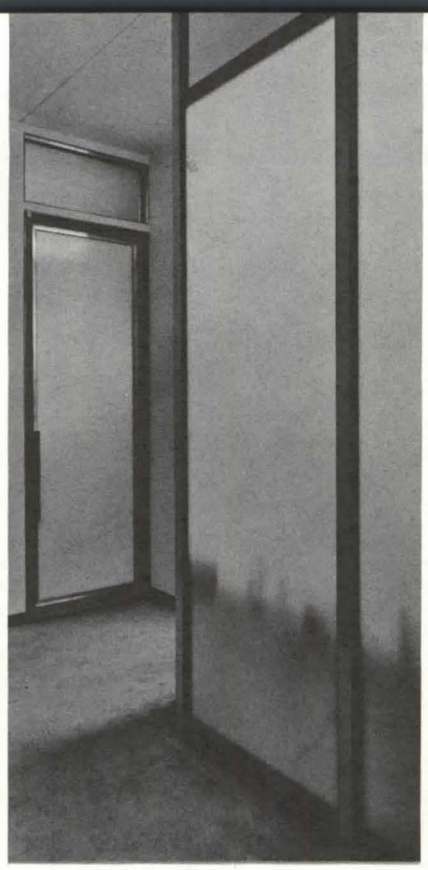


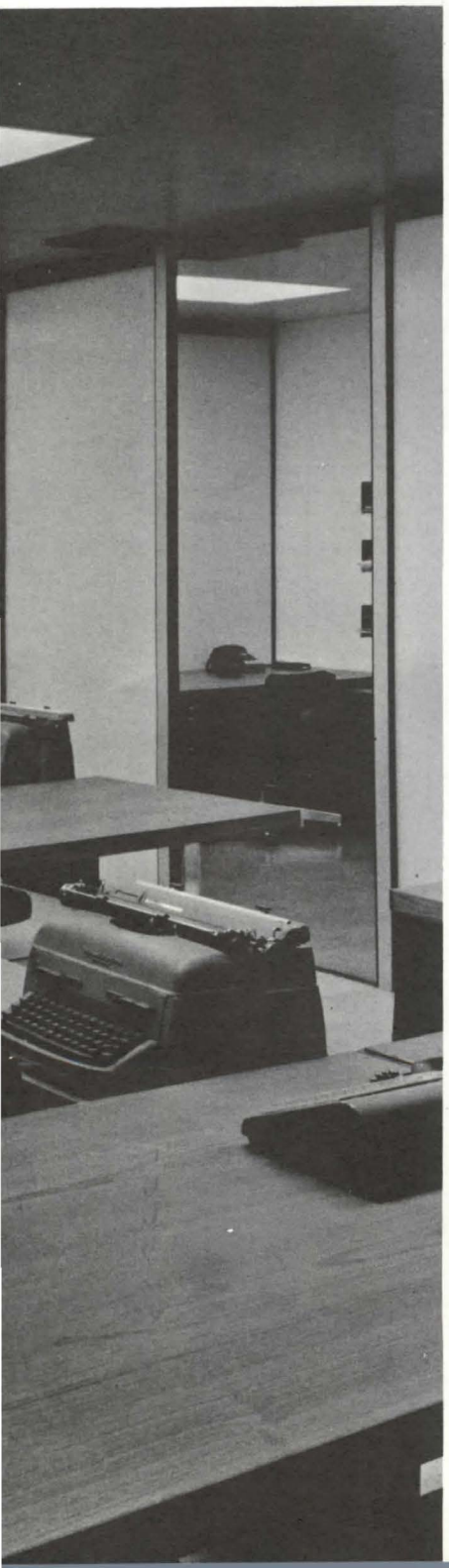
Office of the Port Steward.



Office of the Legal Counsel.

General office and accounting space on the third floor is predominantly white area divided by a partition of multicolored files.

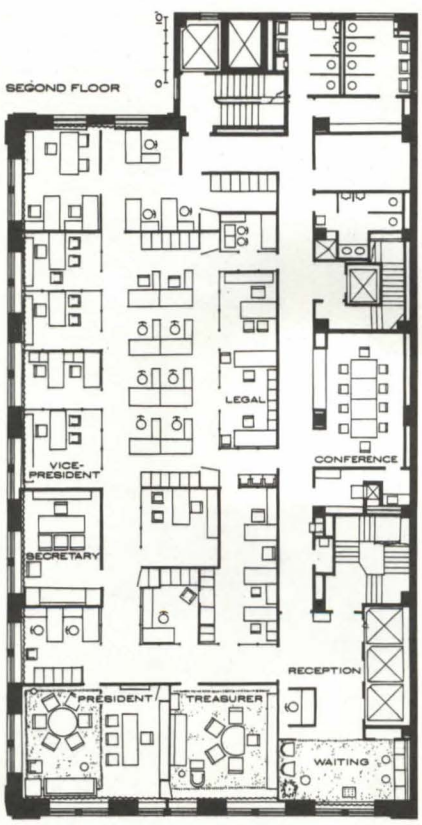


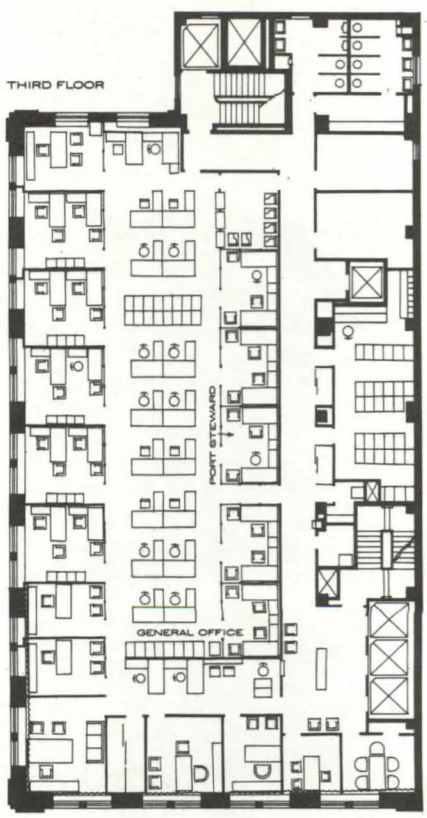


DATA: descriptions and sources of the major materials and furnishings shown.

CONFERENCE: Walls: white painted plaster. **Floor:** carpet/green/Kent. **Ceiling, Door:** teak/Ezra Blank Assoc. **Lighting:** downlights/Gotham Lighting Corp. **Table:** teak/rosewood/Gerald Luss design/custom Ezra Blank Assoc. **Chairs:** Luss design/Edward Axel Roffman; black saran upholstery/Unika-Vaev Corp.
RECEPTION, WAITING: Walls: white plaster. **Floor:** teak / Coughlin Flooring Co.; carpet / olive / Bigelow / through Richleigh. **Ceiling:** white plaster; oak/Ezra Blank Assoc. **Lighting:** downlights, behind banquette/ Gotham Lighting Corp. **Draperies:** white/Isabel Scott. **Desk:** teak/rosewood/marble/G. Luss design/Ezra Blank Assoc. **Desk chair:** in black naugahyde/Knoll Assoc. **Pedestal tables:** Knoll Assoc. **Lounge chairs:** Luss design/Edward Axel Roffman; in red silk/Thaibok. **Stool:** chrome/E. A. Roffman; olive leather/Gilford Leather Co. **Plant:** The Greenhouse.
VICE-PRESIDENT'S OFFICE: Carpet: cedar color/ V'Soske. **Drapery:** white/Design-Tex. **Desk, cabinet:** teak/black metal/polished steel/Peerless Steel Equipment Co. **Desk chair:** chrome steel/black upholstery/ Royalmetal Corp. **Armchairs:** walnut/Edward Axel Roffman; green upholstery/Rancocas. **Plant, pot:** The Greenhouse.

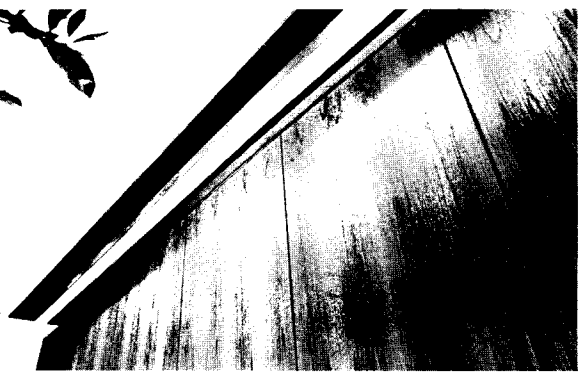
HALLWAYS: Doors: aluminum frames/teak surround/ rosewood handles/Luss design/Ezra Blank Assoc.; Huewhite glass/Mississippi Glass Co. **Carpet:** gold/Spinning Wheel.
GENERAL OFFICE: Partitions, Doors: *aluminum*, black metal; brown steel/Aetna Steel Products. **Glass:** Huewhite/Mississippi Glass Co. **Ceiling, Lighting:** acoustic / Sonoface / white / Owens-Corning Fiberglas; troughs/Lightolier. **Floor:** white tile/Armstrong Cork Co. **Desks:** teak/black metal/polished chrome/Peerless Steel Equipment Co. **Files:** metal/multicolors/Peerless. **Chairs:** posture / Knoll; armchairs / Royalmetal Corp.

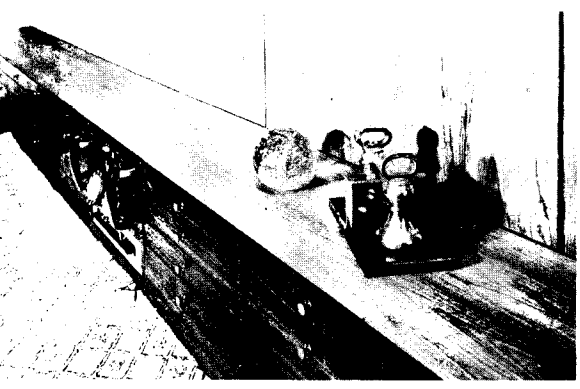


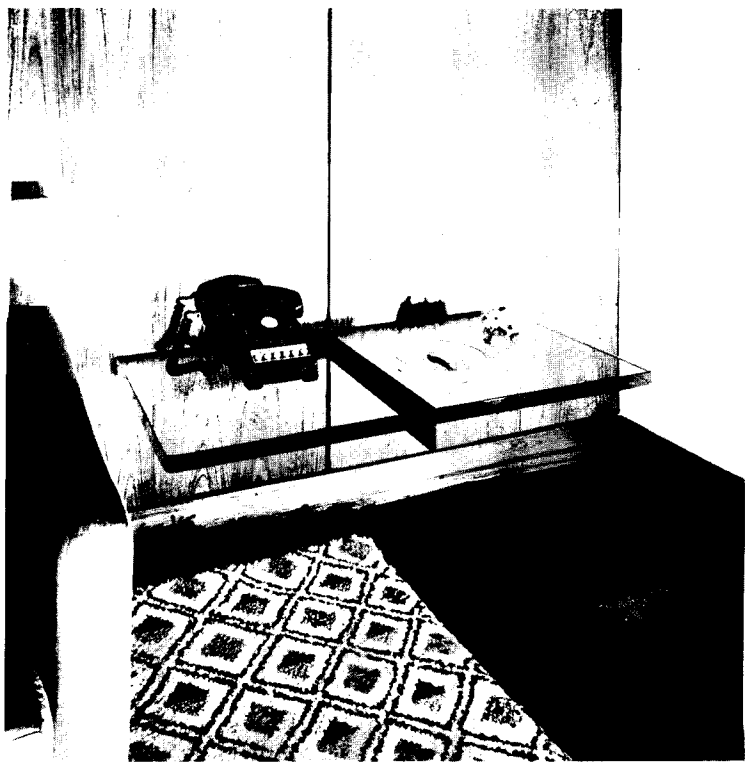


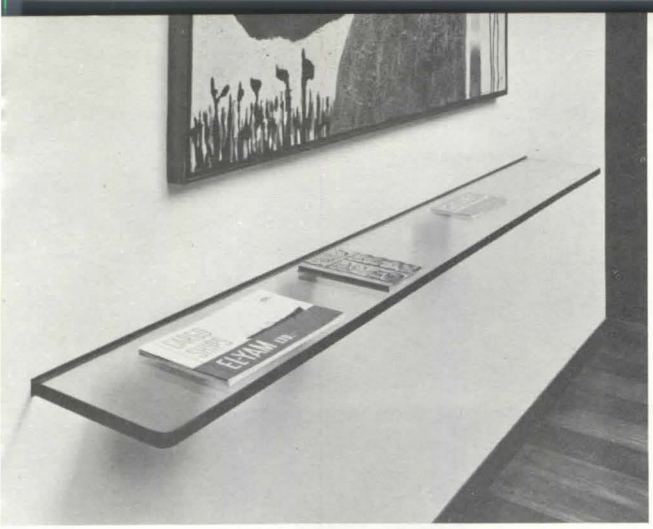
Treasurer's office (this page) *has teak-panelled walls and a white, brown, and ochre carpet that give the room a feeling of residential luxuriousness. A glass shelf used as an end table* (below, right) *relates to the industrial motif.*

TREASURER'S OFFICE: Floor: tile/cork/Kencork. **Carpet:** white/gold/brown/handwoven/V'Soske. **Walls:** teak paneling/Ezra Blank Assoc. **Drapery:** white/Design-Tex. **Lighting:** downlights/Gotham; troughs/Century. **Desk:** rosewood/bronze/Luss design/Ezra Blank. Chairs: Luss design/Edward Axel Roffman; upholstery/coffee leather/Gilford; red silk seats/Thaibok. **Cabinet:** teak/rosewood/Luss design/custom; phone panels/black anodized aluminum/Vari-Tech Co.; drawer pulls/black steel. **Plant:** The Greenhouse. **Sofa:** Luss design/Roffman; gold silk/Thaibok.

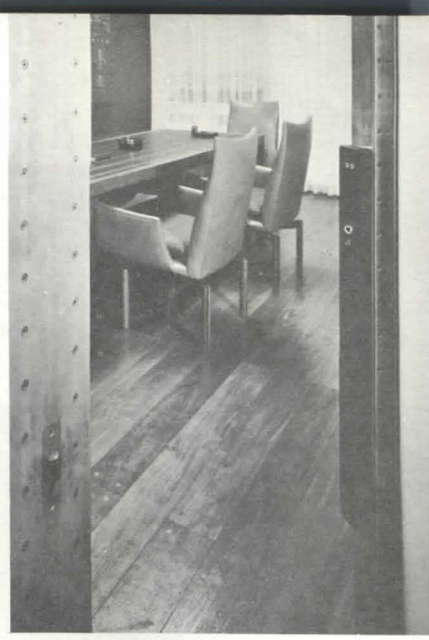










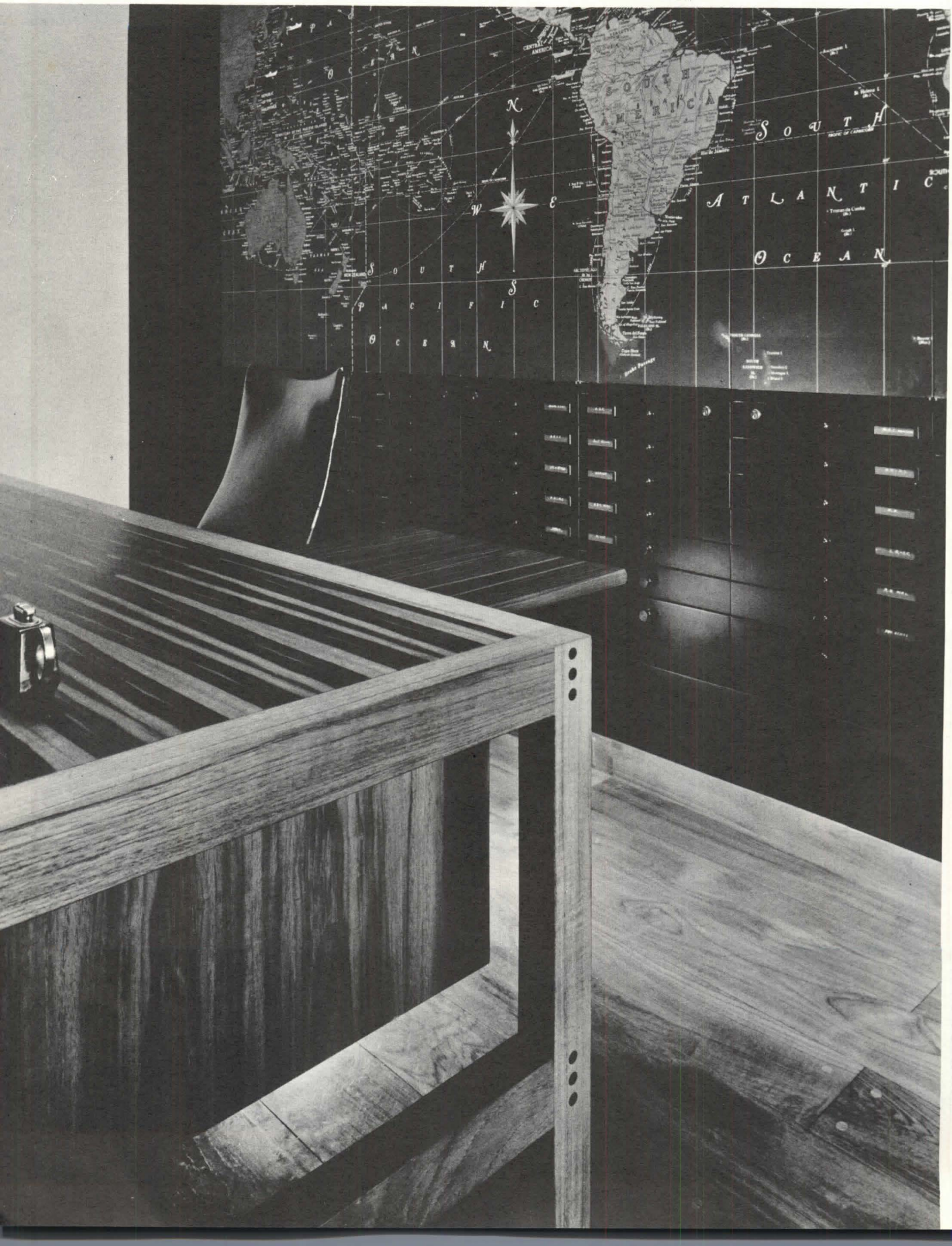


The president's office (this page) *exhibits a spartan elegance that is accentuated by the plainness of the white-plaster enclosure. The stripped, industrial effect of the doors* (right) *is complemented by a play of forms and of rich natural textures, such as the teak floor. Even the cove light over the desk is a pure, unencumbered form, like the white opaline bubble light over the marble-topped conference table* (below). *Similarly, a glass magazine shelf is cantilevered starkly out of the plaster wall* (left, top); *a teak and black metal telephone bracket is another strictly disciplined form* (left, middle).

PRESIDENT'S OFFICE: Floor: teak/Coughlin Flooring Co. **Walls, Ceiling:** painted white. **Storage Wall:** map on cabinet doors/G. Luss design/Hammond Map Co.; cabinets/macassar ebony/Ezra Blank Assoc.; drawers / steel / black / Peerless Steel Equipment Co. **Drapery:** white/E. C. Carter. **Lighting:** cove/fluorescent; pendant/white opaline/Koch & Lowy. **Desk:** teak/macassar ebony/Luss design/Ezra Blank Assoc. **Desk chairs:** Luss design/Edward Axel Roffman; upholstery/black saran, brown wool/Unika-Vaev; natural leather/Gilford Leather Co. **Conference table:** white pedestal/verde antique marble/Knoll Assoc. **Chairs:** oak/cane/Hans Wegner design/Frederik Lunning Inc.



Typical of DFB's design style is the neat and winsome detailing of the president's work area. Teak and macassar ebony complement one another in the cabinetwork of the desk. The storage wall has shelf space behind the map panels and shallow steel drawers beneath for separate storage of individual subjects.



COPYING TECHNOLOGY

BY WALTER T. JOHNS

Copying technology, like other forms of automation, has undergone a revolution in recent years. The variety and capabilities of copying machines have multiplied, as have their flexibility and the range of applications for which they are designed. Quality has attained a new plateau. Unit costs have been pared. Now is a good time for the busy architect to investigate again the whole subject of copying equipment and copying practice. The right approach is significant in terms of time and money savings and a new freedom to improvise. The author is Marketing Manager of the Charles Bruning Company, Inc.

There is almost universal accord on the proposition that the copying machine has arrived and is here to stay. It is like stating one's opposition to sin. On the other hand, the problem of selecting and applying copying methods best suited to a particular situation is a formidable one. Copying technology has been evolving so fast that the variables of 10 years ago are scarcely recognizable today. To reach a decision as to the best approach for his own particular situation, the architect must first determine his copying requirements.

One large firm reports the use of about 40 bound bid sets is typical for contractors bidding a major job. This firm puts the value of these drawings, in drawing time only, at $15,000 for a typical $1.5-million construction job. This value is doubled if allowance is made for research and for the value of a complete set of specifications ($3000 to $4000). The same firm puts the value of its bid set for a typical $18-million job at $25,000 to $30,000 for drawing time alone. Average requirements for drawings, once a job has begun, were reported as 20 copies for distribution on the job, 12 to 14 copies for the contractor, 5 or 6 more for office use, and 2 others for miscellaneous uses. Another firm uses a moist diazo-type copying machine to produce in a month 6900 copies of plans on 22″ x 34″ sheets, 3000 copies of specifications on letter-size sheets, and about 25 prints of plans on 30″ x 42″ sheets. The machine used in this instance handles prints up to 46″ wide at a rate of 40 ft/min. It is equipped with devices for automatic separation of originals and prints, and automatic stacking.

Obviously, with heavy volume, the cost of even the most expensive copying machine is soon amortized if unit cost for copies is low. For most of the heavy-volume machines, such as the one used in the operation cited above, unit copying cost is surprisingly low. In fact, it is almost axiomatic that the unit cost for copies is inversely proportional to the initial cost of the machine. In estimating volume requirements, it is important to consider those copies which are not produced but which would be desirable if unit costs were nominal, if the equipment were available, and if there were no delay necessary in obtaining these extra copies. When the equipment becomes available, additional uses are found for it; as a result, unit cost for the equipment declines. One application tends to underwrite another. Thus, the architect is able to provide better, faster service for clients while at the same time he increases his operating efficiency.

Essentially, there are three ways to fulfill copying requirements: (1) the architect can buy his own copying equipment; (2) he can lease it; (3) he can send the work out to an independent reproduction service. Outright purchase may entail a substantial initial cash outlay, but for volume operations it is unquestionably the most economical and efficient solution: the middleman's profit is eliminated, unit costs are minimized, and maximum control is maintained. It will eliminate delay in obtaining prints needed in a hurry and will insure a tight rein on quality control. Considering the high value put on drawing time, one important advantage in the captive operation is elimination of the possibility of loss of originals sent out for copying. A recent study indicated that drafting time currently costs approximately $14 per hour in the Chicago area, and in many cases constitutes about 70 per cent of engineering costs. The advantages of outright purchase apply in general also to equipment that is leased, although a lease arrangement will in the long run cost more money. The principal advantage in leasing is that the architect can obtain even the biggest amount of capital for the purpose. Most leading manufacturers lease a large proportion of the equipment they have in the field, offering rates as low as 40 per cent of purchase price per year on a 3-year lease, and only 5 per cent per year for renewal thereafter. Lease agreements with option to purchase are also common. Typically, such a plan obligates the manufacturer to apply from 70 to 90 per cent of paid rent to the purchase price if the option is exercised, depending on elapsed time (one, two, or three years) between signing of the lease agreement and exercise of the option. If the option is taken up within a reasonable "trial period" after installation, some manufacturers apply the entire amount of rent paid to the purchase price.

For the small firm, it is often advisable to "farm out" copying of blueprints and larger drawings. However, even the one-man office should weigh carefully the merits of one of the smaller, more versatile machines priced at little more than the cost of a good typewriter. Intelligent application of such a machine will reveal many time-saving applications.

The following summary of equipment available today, together with comments on its capabilities and cost, should give the architect a general understanding of comparative copying-machine potential. More specific information and a more critical evaluation can be obtained by contacting one of the reputable manufacturers of copying equipment. Here, then, is a capsule discussion of each of the main types of equipment, arranged in alphabetical order.

Blueprint Process

The traditional, time-tested, and highly reliable way to make copies of large drawings and sketches is with the blueprint machine. For low-unit cost and dependable performance, the blueprinter is still the standard for many large engineering operations. The process is based on certain organic salts of iron. On exposure to actinic light, the iron salt is converted to another form, which then forms an insoluble blue pigment by reacting with other ingredients in the coating. After exposure through the original drawing, the blueprint paper is washed to remove unexposed salts, passed through a chemical (bichromate) bath to intensify the blue image, washed again, and then dried over heated drums —all in continuous sequence. The result is a negative print of the original.

Blueprint machines that are on the market today generally range in price, from $10,000 to $18,000, handle sizes

up to 54″ wide, and operate continuously at rates up to about 45 ft/min. They are commonly equipped to make brownprints as well as blueprints. Because of the high cost, few architects would find it feasible to own a blueprint machine.

Diazo Process

The diazo process depends on two characteristics of diazo compounds: (1) their instability when exposed to ultraviolet radiation; (2) their ability to unite with other chemicals to form dyes. In practice, copies can be made of any original that meets two requirements: (1) the image must be opaque to ultraviolet rays; (2) the material on which it appears must be translucent. (Of course, the reverse condition will serve as well, the interchange of the terms "image" and "background" being arbitrary anyway.) These are the only conditions that inherently limit diazo copying, and even these may be overcome by integrating other processes that are altogether compatible with diazo, as we will presently discuss.

Essentially, two steps are involved, the precise sequence depending on which type of diazo process is used. However, in most modern equipment, the entire process is carried out continuously and automatically within the machine. The operator simply feeds the original and the print material into the machine at one end and withdraws a flat, dry print at the other. The product is a positive print.

Moist Diazo. In this case, the liquid developer is brought into direct contact with the print surface. The first step involves selective exposure of an emulsion on the print surface, containing the diazo compound, to radiation, which destroys the diazo wherever it is exposed. The second step involves application of a developer and chemical combination of the undisturbed diazo with the developer to form a dye. The moist print is then automatically and continuously dried by air or infrared radiation.

Dry Diazo. With this method, the chemical reaction uniting diazo and developer to form a dye can take place only in an alkaline atmosphere. In this case, both reactants are already present on the print surface at the outset. After exposure, the print material is drawn through a chamber filled with ammonia gas. This atmosphere triggers dye formation in those areas of the coated-print surface that have been exposed to the radiation.

Advantages. Perhaps the most significant advantage of the diazo process is its capability of making reproducible reproductions, or intermediate masters. It is just as feasible to make the copy on translucent stock treated with the appropriate emulsion as it is to make it on opaque stock. The copy made this way is as suitable as the original for use as a master to generate additional copies.

The intermediate master, or reproducible copy, encourages improvisation. The designer can make any number of duplicates, plans, elevations, or perspectives, and can sketch alternative suggestions on these. He can then make copies of any number of the tentatively extended drawings and improvise variously around the initial improvisations, again without restraint or concern for spoilage. Other advantages are the high quality and wide variety of materials on which prints may be made—paper, film, or cloth, translucent or opaque. The papers can be white or in color, and in a variety of weights. Despite the thermal and chemical action to which they are subjected in processing, prints emerge uncurled, and unmarred by scorching, smearing, or wrinkles. They present high contrast, with clean, sharp lines and clear background.

In addition to the technological advances in paper, film, and tracing cloth, ingenious development of a wide assortment of tapes, templates, dyes, and other accessories has expanded the flexibility of diazo applications. Valuable tracing time is saved by taping in templates for standard fixtures, such as doors, windows, and appliances. The same technique may be used to mortise in copies of detail drawings from catalogues or suppliers' files. The development of perfectly translucent adhesive tapes with excellent surface properties removed the last major obstacle to free use of templates. There are tapes that will take all types of markings on the (outer) matte surface and from which erasures are easily made. When copies are made by diazo process, these transmit no shadow or outline to reveal the presence of the tape itself.

Translucent films are another boon to flexibility. These take all sorts of markings, including pen, typewriter, lead pencil, and crayons. Erasures may be made by rubber eraser, washing, or razor blade. An endless variety of combinations, extensions, and revisions is facilitated by cutting away areas of the film, combining elements from diverse sources, and copying with film used as overlay. Another ingenious device now available is a pencil whose marks are visible to the eye but invisible to ultraviolet light. This is useful for noting identifications and instructions on masters when these notations are not wanted on the copies made from them.

Color Versatility With Diazo. Techniques have been developed to make possible the processing of copies in two or more colors; these are especially useful to the architect. By superimposing a plan for electrical elements on a floor plan, for instance, and using contrasting colors, he can give clear representation to two different systems at the same time, without making the drawing too confusing. The color coding adds another dimension to the information without additional drawing or lettering, making it relatively easy to tie in a detailed drawing of one system or element with adjacent or overlapping elements to show their relationship. Multicolor copies can actually be made from single color originals, including slides for use in overhead projectors, flip charts, brochures, easel displays, maps, and graphs—all by diazo processing. Use of contrasting colors is particularly effective in presentations and explanatory material used in educating the client concerning the architect's intentions or proposed design.

A number of interesting variations have been developed that serve both to present information more lucidly and to provide dramatic effect. One method is to develop only partially a film or paper, to demonstrate the condition prior to some alteration or addition; then, in the course of the demonstration, to develop with a quick wipe of a cotton swab the rest of the drawing, showing the proposed change. The cotton, of course, applies the developer, which reveals the previously invisible part of the drawing.

Also valuable to the architect is the versatility of the diazo compounds in the formation of many different dyes. After a single exposure, he can bring out as many colors as he wishes by selective development of the exposed film or paper. He may, for instance, swab one strip on a bar chart with a developer that produces a red dye, treat the next strip with another developer to produce a

blue dye, and so forth.

Many other innovations have been developed. One of these produces positive and negative prints on opposite sides of the same translucent sheet, and slightly out of register. This yields an interesting mobile or shadow effect. A second innovation involves printing the image on both sides of a translucent sheet in register but in different colors. The effect is a derived color, e.g., violet produced by printing red and blue. Still another involves bringing up the image in a mottled or stippled pattern by using a spraying or spattering technique in applying developer to the exposed image.

Costs. Diazo systems are low in unit cost for high quality prints. Paper that is of good substance, snow white, and will not curl or become brittle in processing is available at a cost of about 1.5¢ per sq ft. Equipment ranges from a small desk-top model, which costs about $300 and can copy 90 letter-size sheets in one hour, to the big diazo whiteprinters. Whiteprinters may cost roughly from $1000 to $12,000 with copying capacities ranging from 24″ to 54″ in maximum width, and from 12 to 125 ft/min in linear speed of effective operation. Especially designed to meet the needs of the medium-size architctural firm are tabletop whiteprinters that operate at 35 and 45 ft/min and handle widths up to 42″. These are priced to incorporate special economies made possible by the unique nature of the architect's needs. Optional features available on the more expensive models include automatic stacking devices, automatic separation of prints from originals, and choice of front and rear delivery of prints.

Silver Emulsion Process

One serious limitation in the diazo process is its inherent dependence on translucent originals. On the other hand, all processing employing the diazo principle is completely compatible with translucencies made by the silver-emulsion process; and, with access to equipment for this process, it is a simple matter to produce transparencies from opaque originals. The capability for this, of course, also permits copies of original material printed on both sides of a sheet to be made.

In general, the silver emulsion process works in the reverse of the way the diazo principle operates. Light, instead of burning away the dye-forming compound in the coating, activates the silver compound, which then forms an opaque image in the developer. It therefore produces a contact negative of the original, rather than a positive image, as in the case of the diazo process.

When a large quantity of prints is required, economy suggests diazo copies. If the source material is printed on opaque stock or on both sides of the sheet, the silver process may be used by reflex to make translucent intermediates from which additional copies may be made rapidly and at low cost by diazo methods. A large number of copies giving a sharp image on papers of high quality cannot be obtained as economically by any other means.

With some advanced equipment now on the market, an exceptional technique, which employs silver emulsion in direct, rather than reflex, exposure, has been developed for certain operations. Better contrast is obtained in rejuvenation of old originals by placing the original, face down, directly on the sensitized surface of the special photo negative paper used in this process, and exposing through the original to the print surface. A similar technique makes it possible to obtain economical copies of blueprints (thus obtaining a blackline positive). The positive is then used to make low-cost additional copies or "sepias."

Silver-emulsion processing is especially adapted to "scissors/drafting" techniques. Shop drawings, vendors' drawings, and other source materials containing elements to be reproduced in one of the architect's own drawings are borrowed, copied by silver emulsion process, and returned. The useful elements are then cut out of the copies, positioned on the architect's preprinted tracing paper, and secured in place with translucent tape. Drawing number and part number are added and prints made from the paste-up, again using the silver emulsion process.

Advantages. A characteristic of the silver principle is its extraordinary capacity to obtain high contrast. Because of this, it is often used to restore old originals or materials on which the image is feeble. A copy master is thus made on which the image is traced in much denser lines than those that appeared on the original. It is often desirable, when many copies will be required, to make an improved master copy for generation of the additional copies. This preserves the original from unnecessary handling and possible additional damage or even loss.

Wash-Off Process

One of the best methods to restore old originals that are torn, smudged, or wrinkled is a two-step wash-off process employing a translucent brownprint or negative and photosensitive print paper or tracing cloth. The image or defects that marred the original are removed from the intermediate. Next, the intermediate is held in close contact with a special photosensitive material during exposure to intense light. The unexposed, sensitized material is washed away and the print material is immersed in the developer. Finally, excess developer is washed away. The product is a positive print that is clean, clear, flat, and easy to alter.

The wash-off process is also recommended for production of a tracing cloth on which revisions are to be made. The intermediate is opaqued out in the area where the revisions are to be drawn in. Detail in this area will disappear when the sensitized material is washed off. Another recommended application is production of a facsimile of a lost or destroyed original by printing wash-off copies of a negative intermediate made from a whiteprint, blueprint, or other copy of the original. The method is also useful in making composite prints from negative intermediates produced from several drawings or parts of drawings.

Office Copying

The architect also has requirements for copying office correspondence, office memorandums, schedules, and so forth, on roughly the same scale required in any typical office operation. In the smaller or medium-size architectural firm, careful planning will often make it possible to satisfy office copying requirements with the same equipment used primarily for copying drawings and prints. On the other hand, depending on physical relationship of drafting room to office operations, as well as the size of the operation, it is sometimes more efficient and economical to provide smaller copying machines at a convenient location for specific use of the office staff only.

Criteria for the selection of equipment for "casual" office copying are initial cost, unit cost in operation, vol-

ume of output, versatility of the equipment, and quality of the copies. With these considerations in mind, the principal types of office copying machines may be evaluated as follows.

Diazo Office Copiers. The most inexpensive copies are made by the diazo process, the material costing only about 1¢ per letter-size sheet. In addition to the often important capability to produce reproducible copies, there is the physical superiority of the copies, which are delivered flat, dry, strong, permanent, clean, and attractive in appearance. Initial cost of good diazo copiers for the office is in the approximate range from $300 to $1000.

Electrostatic Process. Machines in this category illustrate the principle that low unit cost in operation and high quality are often associated with high initial cost. These machines, which are the most expensive of the office copiers with respect only to initial cost, make good quality copies of a letter-size original for about 3½¢ per copy (about 2½¢ for paper and 1¢ for material). They will also prepare premium sheets for making offset masters at a cost of about 3½¢ per letter-size sheet. A good electrostatic copier is priced at $900 to $3000. Typical of one of the better machines, which makes 900 copies of letter-size material per hour, is one that operates as follows: The image is transferred to the copy sheet in the form of a positive electrical charge. The charged surface is then dusted with fine electronegatively charged particles. These adhere to the image-arranged, positively charged areas to form a positive copy image. Since the degree to which positive charge is removed during exposure is a continuous variable, graduations in tone values are reproduced. Electrostatic machines can, therefore, make good copies of photographs and wash drawings.

Photocopy. In general, there are two methods of photocopying, using either the diffusion transfer or the dye transfer principle. In the former case, copies are made by direct contact with a light-sensitive negative paper and transfer of the image to a treated material. The method, usually a two-step process, is versatile in that it copies all colors, inks, and so on, from originals prepared on every kind of base material. The dye transfer principle differs in that the image is transferred from a matrix to non-treated paper. There are photocopy machines on the market for as little as about $100. But cost per letter-size copy ranges from 4¢ to 9¢ each by diffusion process and at least 2½¢ per copy by dye transfer. The diffusion method produces one to four copies per minute. Five copies are obtained in about one minute by dye transfer. Dye transfer models are priced in the range of $100 to $400, with diffusion machines costing anywhere from $100 to about $625.

Thermography. Some machines in this category are offered at initial cost of about $200, far below that of a good diazo or electrostatic copier. Top price in this category is about $500. Although a thermographic machine will serve adequately for quick copying of certain documents, especially when the copies are required for casual reference only, the more inexpensive models are limited as to versatility and quality of copies. The copy material is sometimes unsuitable for rough handling, storage, or long shelf life. Most models will not reproduce certain inks (those lacking carbon or metallic content). Copy material costs about 4½¢ or 5¢ per letter-size sheet. Thus, if volume is substantial, the initial advantage in low cost of the equipment is soon dissipated by the higher unit cost for copies.

The architect who makes a careful investigation of the efficient machines and supplies for copying that are on the market today stands to gain a great deal in the way of time, money, and creativity.

COPYING MACHINES BY TYPE: BASIC DATA

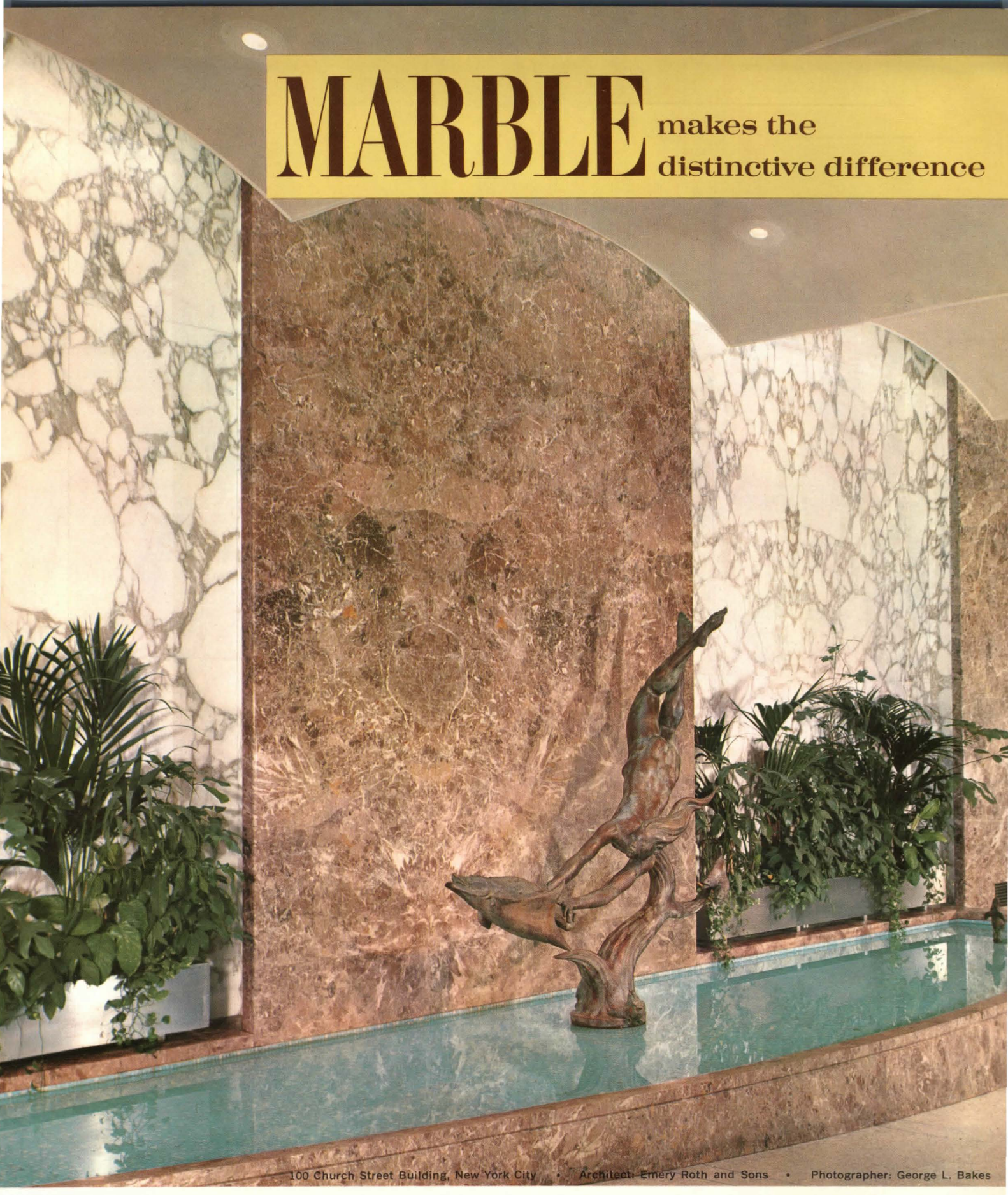
	Price	Image	Product versatility	Max. width	Speed[1]	Letter-size[2] Materials cost
Moist diazo (Office use)	$300-$1000	Pos.	Reproducible copies; prints on all stock; graded tone values; original must be translucent.	10″–40″	200-800cc	1¢
Dry diazo (Office use)	$300-$1000	Pos.	As above.	10″–40″	200-800cc	1¢
Whiteprinters (Large diazo)	$1300-$11,000	Pos.	As above.	24″–54″	15′–125′	1¢
Silver-emulsion		Neg.	Wider tonal range; prints have good storage life; superior contrast; reflex process prints negative.	Up to 36″	240cc	5¢
Blueprinters	$2600-$18,000	Neg.		24″–54″	45′	.9¢
Electrostatic	$900-$3000	Pos.	Graded tone values; superior for copying photos; wash dwgs. good storage by contrast, lower than silver.	11″	360-900cc	3½¢
Thermographic	$200-$500	Pos.	Limited to images with carbon or metallic content; legibility variable.	8½″–14″	900cc	5¢ to 9¢
Diffusion	$100-$625	Pos. or Neg.	Wide range of sensitivity to color.		60-240cc	4¢ to 9¢
Dye transfer	$100-$400	Pos.	As above.		300cc	2½¢

[1] Expressed as number of letter-size sheets or linear feet.

[2] Expressed as cost per letter-size sheet or per sq ft, as indicated.

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Removal of Lamp Heat

BY WILLIAM J. McGUINNESS

Recent refinements for composite ceilings are discussed by the Chairman, Department of Structural Design, School of Architecture, Pratt Institute.

The multipurpose ceiling, adaptable for general and private offices, is improving so rapidly that frequent progress reports appear to be justified.

There have been some noteworthy examples of custom-designed solutions. Notable among these is the ceiling design for the offices of the Union Carbide Building in New York City (M. E. CRITIQUE, JUNE 1960 P/A). This design was so efficient that the usual functions of light, sound control, modular office divisions, and air distribution were located within a fully luminous ceiling.

Though complete standardization is hardly to be expected, or even desired, it is logical that some stock assemblies will be developed to relieve the architect of the greater part of an intricate coordinating process.

One step in this direction is the use of isolated luminaires with space around them for acoustical treatment and for office partitions. It is possible to use these, without glare, at the highest lighting intensities for offices recently approved by the Illuminating Engineering Society. Although the fully luminous ceiling has many advantages, it should not be considered entirely essential for high-intensity lighting.

The distribution of air through the luminaire and its return through the same or other units is coming increasingly into use. This eliminates from the ceiling surface the air-diffuser or return-air register, as well as the dividing rails often used to receive the office partitions, resulting in greater simplicity of design.

As a result of recent studies, strong impetus has been given to the principle of passing air through the troffer by using the return air to directly remove the lamp heat and prevent its entering the room. Through this process, the amount of air passing through the office space may be reduced, thereby minimizing sound and drafts.

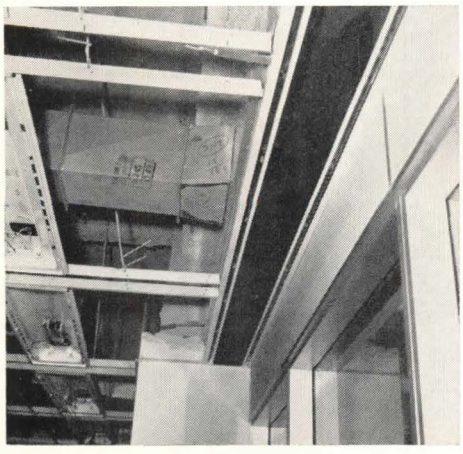
Two companies that have had a long-standing association in the development of these principles for the production of better units are Day-Brite Lighting, a division of Emerson Manufacturing Company of St. Louis, and the Barber-Coleman Company of Rockford, Illinois.

One result of their collaboration in research and design is the installation of 6000 Day-Brite Clymatons in the headquarters of the Home Federal Savings and Loan Association, in San Diego (*below, right*), designed by Frank L. Hope & Associates, Architects and Engineers. One of the new features of these troffers is an automatic temperature control in a single ceiling element, using a new concept of transferring heat from the lighting fixture into the plenum area.

The troffer system provides an average light intensity of 125 ft-c. Each unit, 1′ x 4′ in area, is capable of supplying five distinct functions simultaneously: lighting, air supply, air return, heat transfer, and an ideal location of the electronic temperature sensing element.

Longitudinal slots (*below, left*) deliver the supply air. Each unit supplies 65 cfm at 55 F for cooling, a differential from room temperature of 20 F. The air-change rate is eight per hr. End slots permit air to be returned via the lamp compartment and out through a dampered opening in the top of the fixture. The air slots in the frame also act as a filter that traps dirt before it can enter the lamp chamber. This filter action lowers the light losses due to dirt accumulation on lamps, reflectors, and lenses. The cool return air keeps the lamp environment to within one degree of its optimum temperature for optimum lamp efficiency (77 F).

About 80 per cent of the total light-heat generated is carried into the plenum. The immediate removal of heat from the lamp chamber produces approximately 25 per cent more light.





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EP-31



Specs Teaching In Schools

BY HAROLD J. ROSEN

An evaluation of P/A's survey probing the present status of specifications courses in North American schools of architecture is made by the Chief Specifications Writer of Kelly & Gruzen, Architects-Engineers.

With the daily influx of new building materials on the market, mainly the products of chemistry, new metal alloys, and electrochemical finishes, some believe that a greater emphasis should be placed on the teaching of the science of building materials.

In the FEBRUARY 1963 P/A, this column discussed the qualifications a specifications writer should possess, and the courses he should obtain in a school of architecture that would provide him with a suitable background for his work.

As a result of this article, P/A conducted a survey of schools of architecture early this year to determine the extent to which specifications writing is being taught today, and whether courses in the science of building materials are included in their curriculums.

The survey was based on the assumption that specifications writing had become so complex that some of its practitioners were questioning whether it should not become a profession of its own, rather than remain exclusively as part of the work of the architect.

To provide P/A with some of the answers, a brief questionnaire was circulated to 75 schools of architecture in the United States, Canada, and Mexico. Replies were received from 64 schools, which indicates the interest shown in this problem by educators in the field of architecture. (Sixty-two answered the questionnaire and two responded in terms of the general problems raised.)

An analysis of the questionnaire provides the following information:

Question 1. Is there a required course in architectural specifications in your curriculum?

Yes	28
No	34
Elective	None

Of the schools reporting *No*, several indicated that specifications are taught as part of the following courses: Architectural or Office Practice, 12; Working Drawings and Specifications, 5.

Question 2. How many hours per week are devoted to this course?

For schools having scheduled courses:

No. of Hours	No. of Schools
1	5
1½	2
2	11
3	11

Question 3. How many semesters are regularly scheduled for this course?

Semesters	No. of Schools
½	3
1	21
1½	1
2	2
3	1

The results indicate that the average specifications writing course is given for two to three hours per week for one semester.

Question 4. Is a required course in building materials offered?

Yes	58
No	2
Elective	2

Question 5. Does the course in building materials cover the physical and chemical properties of the following materials: concrete, steel, masonry, roofing, sealants, thermal insulation, paint materials, plastics, glass, acoustical materials?

While approximately 40 schools indicated that their courses include all of the above, about 10 indicated that sealants, paint, plastics, and acoustical materials are not included. Four schools gave courses only in the basic materials such as wood, masonry, and steel; and one school gave no course at all. Several that offered the materials course indicated that some investigations of the physical and chemical properties are made, some given sketchily, while others complained of a lack of a suitable textbook.

Question 6. Is a materials testing laboratory course offered?

Yes	20
No	42

Of the 20 replying *Yes*, five are offered as electives. Of those replying *No*, one indicated that a laboratory testing course is being programmed for the future.

Question 7. Do you believe that the field of specifications writing is so complex that it warrants a curriculum of its own, including chemistry, metallurgy, properties of building materials, materials testing, business law, and estimating?

Yes	16
No	45
Maybe	1

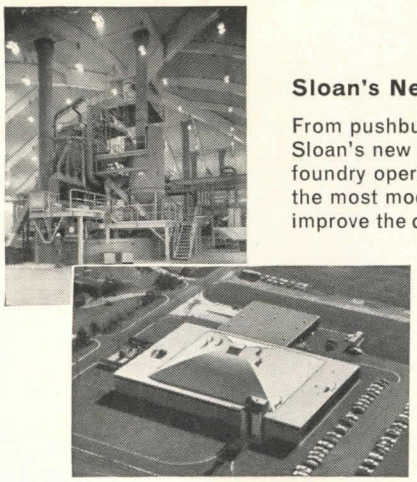
Since the time a somewhat similar survey was made in 1957 by the late Professor Raymond Fisher of Carnegie Institute of Technology, some progress has been made in the field of specifications education. The number of schools having a required course in specifications writing has increased from 12 to 28.

Whereas the survey made by Professor Fisher was concerned solely with specifications writing courses, the current inquiry was broader in scope. In our opinion, we felt that the key to the problem is whether adjunct courses—such as the science of building materials, materials testing, metallurgy, chemistry, and business law—were being taught that could properly prepare an individual as a specifications writer.

Elements of specifications writing that can be readily taught include the organization of the material, specifications language, specifications clauses, avoidance of duplication and repetition, pitfalls, and pros and cons of "scope" and "or equal."

However, specifications writing is only an instrument of communication through which the basic technical information on building materials, methods of construction, legal requirements, and testing procedures are transmitted to the ultimate user of the specifications. These additional subjects must be made a part of the curriculum if competent, proficient specifications writers are to emerge from our schools of architecture.

Next month's column will be devoted to comments by educators on the controversial Question 7.



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Corporate Practice of Architecture

BY JUDGE BERNARD TOMSON AND NORMAN COPLAN

P/A's legal team discusses the implications of newly adopted New Jersey statute that permits corporations to practice architecture.

Professional practice by corporations is becoming more prevalent in the United States. Several states have adopted corporate professional practice statutes that permit, under restricted conditions, the practice by corporations of architecture, engineering, and, in some cases, of medicine, law, dentistry, and other licensed professional pursuits.

The pressures for corporate architectural professional practice stem from the business and tax advantages arising from this form of organization (see IT'S THE LAW, FEBRUARY 1959 P/A). Proponents of architectural corporate practice emphasize the advantages of this method of practice, which, they point out, provides a continuous organization; permits capital accumulation for the furnishing of comprehensive services and the handling of large and complex projects; offers greater security to employees because of the continuity of existence and the employment of pension and other similar plans; and provides a means of capital accumulation and tax saving to the principals of the corporation through profit-sharing plans of a type not available to the individual or partnership form of practice.

On the other hand, opponents of corporate architectural practice have emphasized the importance of individual responsibility as contrasted to limited corporate liability; have stressed the dangers to the public from the subordination of professional control to nonprofessional objectives; and generally contend that corporate practice is a dilution of the safeguards implicit in the licensing of natural persons.

The State of New Jersey has adopted a corporate professional practice statute, effective in 1963, which seeks to safeguard the public against the dilution of individual professional responsibility, while making available to the professions those business and tax advantages realized in corporate organization.

This statute, which authorizes the corporate practice of architecture, engineering, medicine, law, dentistry, accountancy, and other professions, is primarily premised upon the requirement that the stock of the professional corporation be owned exclusively by licensed professionals. The statute prohibits the transfer of the stock of the corporation, except to other duly licensed individuals. In the event of the death of a stockholder, the statute provides that his estate may continue to hold the stock for a reasonable period of administration of the estate, but shall not be authorized to participate in any decisions concerning the rendering of professional services. The statute requires the estate to sell the stock to the corporation within a limited period of time, at book value, unless the corporate charter or by-laws provide for some other method of disposition, which in no event shall permit the transfer of stock to nonprofessionals.

By requiring that ownership of the corporation be in the hands of licensed professionals, and by restricting the transfer of stock to the corporation or to other licensed professionals, the statute seeks to insure that the corporation will at all times be subject to professional control, thereby responding to the critics of corporate professional practice who urge that professional judgments and decisions will be subverted by nonprofessional goals. In addition, to further insure professional control of the day-to-day operation of the professional corporation, the statute also provides that the professional services offered by the corporation must be performed through officers and employees who are duly licensed.

In respect to liability, the New Jersey statute, although providing that the corporation shall be liable to the full value of its assets for any negligent or wrongful acts or misconduct committed by any stockholders or employees while engaged on behalf of the corporation in rendering professional services, also provides that the individual furnishing the professional services "shall remain personally and fully liable and accountable for any negligent or wrongful acts or misconduct committed by him, or by any person under his direct supervision and control, while rendering professional services on behalf of the corporation." Individual responsibility is thereby maintained, and the professional service client may look both to the corporate assets and to the personal assets of the individual performing the services on behalf of the corporation in the event of negligent or other improper performance. The continuation of individual liability leaves unweakened the incentives for competent and faithful professional performance, thereby satisfying one of the most serious objections to corporate practice.

Although the Internal Revenue laws have been amended to permit individual professionals to take limited advantage of the capital-accumulation and tax-saving features of Treasury-approved profit-sharing plans, which for many years have been available only to corporations, such amendment was, from the viewpoint of the individual professional, inadequate and unsatisfactory. The tax advantages are still much greater for the principals of a corporation under existing law than for the individual practitioner. Consequently, the business advantages of corporate professional practice remain significant. In addition, even where the professional remains individually liable for the adequacy of his performance, a corporate organization can furnish limited liability, in respect to claims, for damages arising from circumstances having no connection with professional performance. The New Jersey statute appears to be an effort to provide the professional with the business advantages available to the average businessman, without impairing or diluting the ethical standards and public duties of the licensed professional.



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Photo: David Hirsch

More on the Pan Am Building

Dear Editor: Your necrology on the Pan Am Building (APRIL 1963 P/A) reminds me of the very similar case a few years back in Rimini. Remember what the Italians did—they tore the rascal down.

GUNNAR BIRKERTS
Birmingham, Mich.

Dear Editor: The Pan Am Building illustrates again, for the benefit of the general public, the great gulf that exists between the City Planning Commission's zoning constraints and a visually acceptable result. The negative influence of zoning is producing a negative city scene and will continue to do just that until city planning enthusiasts decide to give to design and aesthetics equal billing as to sky-exposure planes and floor-area ratios. Timidity, nothing more or less, is responsible for this Paul Bunyan.

RANIERO CORBELLETTI
Professor of Architecture
Pratt Institute
Brooklyn, N.Y.

Dear Editor: On the whole, I agree with your criticisms of the Pan Am Building. The problem, however, does not so much involve this particular building or New York City, as what is to be done about the increasing intensities of land use in the core of great cities. As you may know, most living organisms have built-in devices against overcrowding and over-proliferation: they secrete poisons that kill off the young, send out new colonies, or commit mass suicide. But at all events, most ecosystems—which is what a city really is—do achieve a form of natural balance geared to wholesome biologic relationships.

We need to establish in our cities some such biologic balance, or else city living and working will no longer make any sense. There are several ways of achieving this. One solution is to maintain adequate open space between buildings. A second and more reasonable solution is for cities to limit their size by internal agreement, and then to establish colonies that would not be suburban and dull, but that would have their own built-in excitement and vitality, which is the essence of city life. But on another site. Not at Grand Central Station.

LAWRENCE HALPRIN
San Francisco, Calif.

Dear Editor: I am in full sympathy with your comments on the Pan Am Building. I have long been pained that professional leaders such as Gropius and Belluschi lent their names to this enterprise. I am not surprised that the structure is a failure in architectural design, because the men who worked on it must inevitably have had qualms of guilt about their participation in the entire affair. No architect can work well if he isn't convinced that what he is doing has at least a fair degree of validity. Evidently the artists on the projects had their troubles, too. It will be interesting to see if the sculpture by Lippold also shows signs of bad conscience.

It seems to me that the only thing for those of us in the profession to do is to boycott Pan-American Airlines. I for one, will never buy a ticket on one of their airplanes unless it is absolutely unavoidable.

LEONARD K. EATON
Associate Professor of Architecture
The University of Michigan
Ann Arbor, Mich.

Dear Editor: I think the Pan Am Building is a welcome addition to the Grand Central area. It causes the sculpture on the downtown side and the building on the uptown side to be set forward in marvelous perspective, and sets them off as decorative elements of the past. It also successfully closes the street in a bold and dignified manner.

The 20,000 new occupants must force something to happen in the area surrounding Grand Central, such as street closures providing double pedestrian ways with covered walkways over the sidewalks, or some other method of isolating pedestrians from automobiles. What is pitiful is that, given this new construction, no provisions were made in the planning department for this additional load of people and automobiles. This is another illustration of the need for a master plan for New York City.

The scale of the building, I feel, relates very well to the windows in the station part, and its color, shape and texture are refreshing changes from the usual tin buildings surrounding it. The murals by Kepes and Albers are fine works of art. The entrance to Grand Central Station is in good scale with the size and character of the building above it; functionally, however, it does not work. During rush-hour periods, circulation is completely chaotic, with a flood of people trying to move in opposing directions.

RICHARD W. SNIBBE
New York, N.Y.

Dear Editor: My reaction to the Pan Am Building is more one of shock, recoil, and curiosity than of satisfaction. In spite of dear old Gropius's *apologia per vita panamericanus*, which he delivered at a Cambridge luncheon on the occasion of his eightieth birthday, the building-shaped cake that was presented him was mercifully not in the shape of Pan-Am.

The top-side lettering is really unforgivable — like a frozen blimp trailer. It hurts.

JIM LAMANTIA
New Orleans, La.

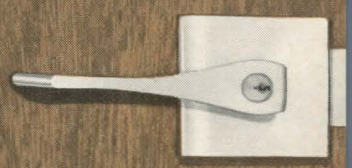
Dear Editor: Your criticism and comments on the colossal Pan Am Building are startling and provocative. Unfortunately, had the same criticism been made before the building was erected, it would not have prevented construction, since the city authorities, even if they had agreed with you, would have been powerless to act.

The fact that more than 250,000 people are to be involved in the daily activities of the building is unbelievable. Just imagine what will happen in that immediate vicinity if the law of averages breaks down and a quarter of a million people decide to go to lunch at the same time.

Private enterprise and uncontrolled civic planning are generally accepted as aspects of our democratic way of life. There apparently was no way of preventing the erection of this "new city" short of an injunction by city authorities following studies of the possible consequences. It seems incredible that such surveys were not made.

It is very easy, of course, to criticize. I have great respect and admiration for Dr. Walter Gropius and Dean Pietro Belluschi, and I really don't know what any architect could have done that would have been better—given the problem of providing the maximum amount of leasable area within the zoning requirements. This objective has, I'm sure, been achieved by Emery Roth & Sons.

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At any rate, it is refreshing to read comments and criticism of a project which is more than just a collection of slick photographs that fills up most of the pages of architectural magazines.

MEYER KATZMAN
New York, N.Y.

The Modern Planning Theory

Dear Editor: I read with infinite pleasure and satisfaction your editorial in the MAY 1963 P/A. The views you expressed happen to coincide with my own—views that I have not only lectured on, but which, for the last 12 years, I have been attempting to translate into action through the work of my office. It is especially significant that a statement of such strength and conviction should appear as an introduction to an issue that features single houses, which, although undoubtedly of great merit individually, play no part—as you so correctly pointed out—and make no contribution to the overall problem of urban development.

VICTOR GRUEN
Beverly Hills, Calif.

Dear Editor: I would like to commend you on your May editorial.

Being myself no friend to the automobile, I found that I was in eager agreement with some of the things you wrote. I have, however, some second thoughts about the problem.

Isn't it possible that the troubles that today are commonly attributed to the automobile were just as much evident in all the traditional forms of transportation? In short, hasn't there been a general failure to comprehend the nature of the "transportation" problem itself, so that consequently no adequate solution has been found?

One need only think of the "elevated" (still in operation in some cities), of the slum-lined, smoky railway tracks, of the subways, and so on, to question whether the present problem is due to its very size, or whether, qualitatively at least, the problem is really historical.

Certainly we have reached a high-water mark in the allegedly cherished ideals of democracy when we are able to say that each person, solely on his own responsibility, may propel himself through the environment to wherever he cares to go, subject to the control of no one except himself.

Yet here we are, with the "ideal," and we don't like it. In fact, as you aptly pointed out, we will grow to like it even less. I wonder if the original bucolic ideal of a family going to a picnic in a Model-T was not meant to appeal to the "upper class" snobbery inherent in most Americans, which the ad men exploit to such advantage even today. Maybe "democratization" of this ideal is, in fact, killing it—as may become the fate of so many currently cherished "ideals."

I'm not trying to be defensive about Detroit, but I do wonder if to attack the "Motor City" really carries the fight forcefully enough to the proper arena — "human" and "social" values. None of the historic forms of transportation that we can think of would solve the current problem, would they?

EDWARD COLBERT
Warren, Mich.

Dear Editor: I read your May editorial with considerable interest. It was well done, and I am in basic agreement with it.

In reading the rest of the issue, however, I was struck by the incongruity between your remarks and the houses singled out for recognition. All of them are on special sites with special views, and are isolated from urban centers—at least, that is the impression gathered from the photographs. It appears that nearly all the houses in the issue have this isolated character. Why not choose some urban houses?

WILLIAM L. SLAYTON
Commissioner, Urban Renewal Administration
Washington, D.C.

[For P/A's reply, see note following the next letter.—ED.]

Dear Editor: I would like to take exception to some of the statements you made in your May editorial.

Traditionally, the house has always been a part of the city. Houses were originally grouped together for the mutual protection of their inhabitants. In Cornwall, for example, there is still in existence today the remains of just such an embryonic city; later historical examples include Carcassonne and Tournay. This concentration of humanity formed the first beginnings of the social organism, which in time began to acquire more complex reasons for its existence. Commerce and/or culture became the city's justification. But always, at the heart of it all, was the urban house.

The city was the place where the advances and retrogressions of civilization were digested and unconsciously incorporated into the continually developing norms of society.

Today, we regularly need emotional relief from the intense, staccato-like energy of Commercial Age cities. To find such relief, it is pointless to have to fight swarms of automobiles to reach Coney Island. Meaningful relief can be found by simply gravitating to the regenerative influence of integrated urban house areas and their natural extensions of grass, trees, water, and human scale.

Rationally, the 20th Century, as a highly complex, diverse, and intense era, requires that these characteristics be expressed in its city form. If the skyscraper and the concert hall, the department store and the sports arena, the heliport and the library are valid functions for inclusion in our New City, then I strongly maintain that the living unit of the human beings who make these functions a reality also be included: the urban house.

I have very briefly stated my argument for the urban house. Space does not permit me to discuss the great variety of house types that should be included in the city scheme. I have merely attempted to provide a basis for my criticism of your article.

In conclusion, I would say, yes, houses are often important architectural statements. Yes, they are fun to design and fun to live in. And *yes*, they *are* urban buildings and *do* play an important part in the urban controversy.

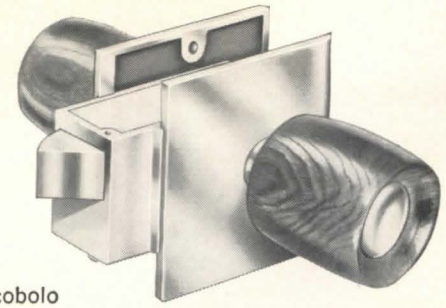
JAMES O'HEAR III
Charlotte, N.C.

[*In the statement, "[Houses] are not urban buildings and play no part in the urban controversy," by "houses" were meant isolated, one-family buildings with maximum possible space around them. If by houses one means rowhouses, apartment houses (houses upon houses), and other forms of urban housing, then they obviously belong to the urban scene. In the* MAY 1963 P/A *we have shown only the former type, which was clearly stated in the Editorial.*—ED.]

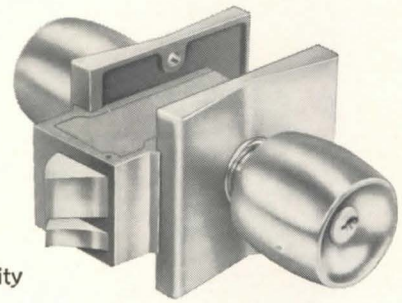
Profound Disagreement

Dear Editor: The account of the "Columbia Crisis" in the NEWS REPORT, MAY 1963 P/A may mislead some of your readers into believing that the "unrest" at Columbia's School of Architecture was confined to a "tenure" or "more tradition-minded" group of faculty. For reasons that may no longer be usefully discussed but that in no way reflected concern either for tenure or for the preservation of the status quo, we the undersigned found ourselves in profound disagreement with the educational objectives of Dean Colbert and the methods by which he sought to attain them at Columbia's School of Architecture.

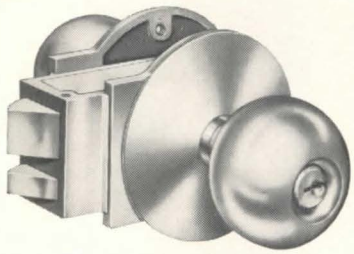
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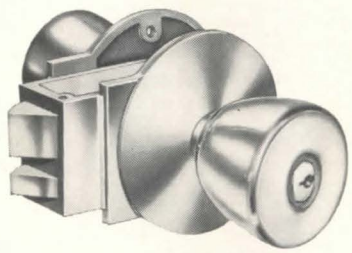
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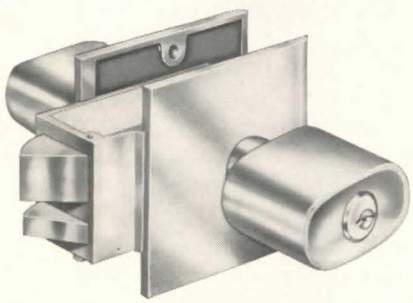


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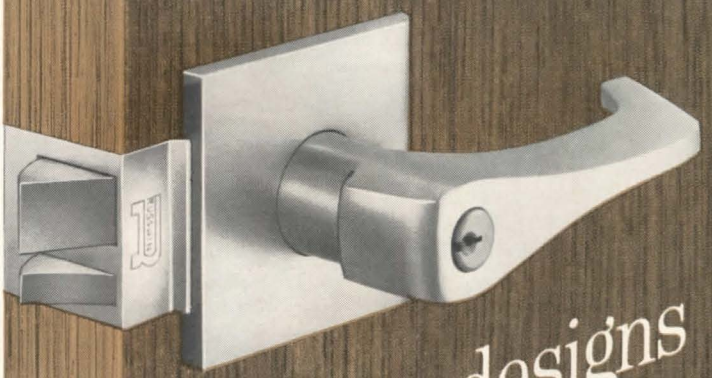
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BY RICHARD W. SNIBBE

THE EVOLUTION OF AN ARCHITECT *by Edward Durell Stone. Published by Horizon Press, Inc., 156 Fifth Ave., New York 10, N. Y. (1962, 288 pp., illus. $15). The reviewer, a former associate of Ed Stone's, now has his own architectural practice in New York.*

At the time the New Delhi Embassy was being designed, Stanley Torkelson, Lloyd Flood, and I were Stone's associates. It was in the 50's, and the beginning of the period of elegance, of the square doughnut with grilles, now so praised, copied, and maligned. My varied reactions to this book are the result of close personal contact with Stone, as employee and associate, for six years.

As it turned out, it was to everyone's benefit that many changes were made in the office when Ed Stone married Maria. His life needed revision, and Maria was the sobering influence, much to her credit. It was not long before he sorrowfully told me we should part company; and one of my fellow associates also was not in the office a year later. Stanley Torkelson, who was responsible for the proportion, scale, and detailing of the Embassy, is still with Ed. To my knowledge, Stone has appointed no subsequent associates.

The office, at the time of the Embassy, was small—about eight in all. It was one of those rare situations where a group of good designers, in essential agreement, was assembled under the guidance of a great designer-critic, a man of good taste, wit and charm, a terrific salesman, and a great drinker, possessed, however, of an uncanny ability to sign a good contract and keep his clients happy. The atmosphere in the office was one of excitement, yet at the same time things were relaxed and free. The work was produced with remarkable speed because we worked around the clock and enjoyed it. We were doing great architecture.

It is just this richness of background —both about the human history of the buildings and about himself and his wide variety of experience, faults, and talents —that Stone has not revealed in his book. To me, it is a colorless picture of a colorful man, drained white by the overwhelming urge to make no enemies and to leave out everything unpleasant.

That is how I feel about the book as an autobiography. But what about the ideas expressed, the philosophy of architecture, the way Ed Stone feels about the profession and its future? We used to have interminable talks about space, form, embellishment, beauty, and character, but very few of his ideas are revealed here. The book, therefore, has little to offer in the field of architectural theory and little to contribute to a better public understanding of our profession, to the enlightenment of our students, or to the advancement of much except Edward Durell Stone.

A book about one's work should not simply be a brochure; and the reason for doing this book is still not clear. This may be a harsh judgment, but our public image is in such bad repair, cluttered by Ayn Rand's *Fountainhead* and *Mr. Blandings' Dream House*, that it is sad to see an architect fail to contribute to the better understanding of architecture when given the opportunity to write. People will argue that architecture speaks for itself, that they have been bored by books written by Le Corbusier, Wright, Neutra, and many others, yet there are some very good books by and about architects. One can't help comparing Stone's book unfavorably with Mrs. Saarinen's new book on her husband as to content of ideas, and with Louis Sullivan's *Autobiography of an Idea* as to stimulating thoughts plus revealing autobiographical material.

Evolution of an Architect reads very well, very easily, from beginning to end, and it is a handsome job in all. The paper could have been better, but the sketches come off well on the stock selected. The early sketches are very good and a fine contribution to the book. Stone was "handy with his dukes," as he used to say.

Lastly, what about the architecture itself? I have the feeling that Stone is a new one-man academy, creating buildings everyone will like. There is great merit in this, but it is not in the tradition of our greatest architects. Ed Stone will not fit Wright's shoes, and I think he knows this. The structural and

Continued on page 168

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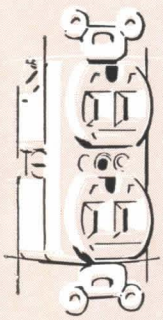
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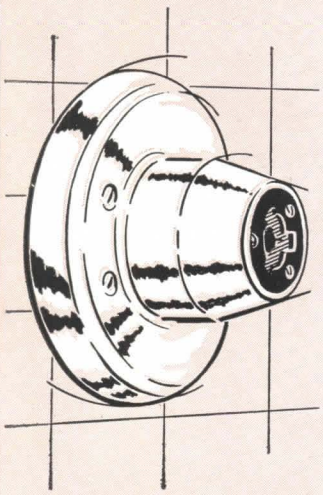
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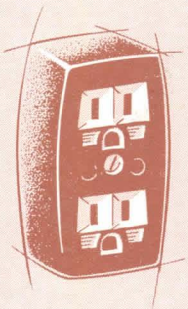
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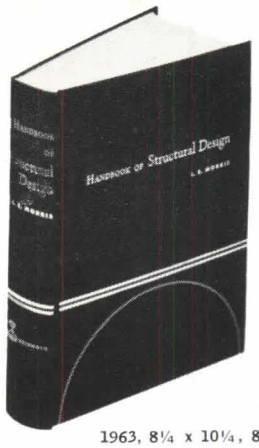
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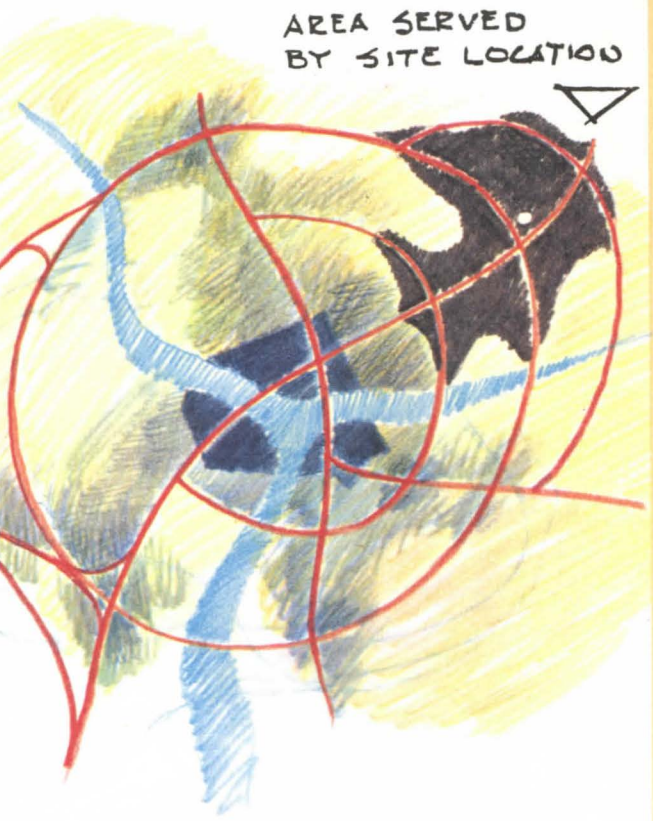
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A Suburban Hospital

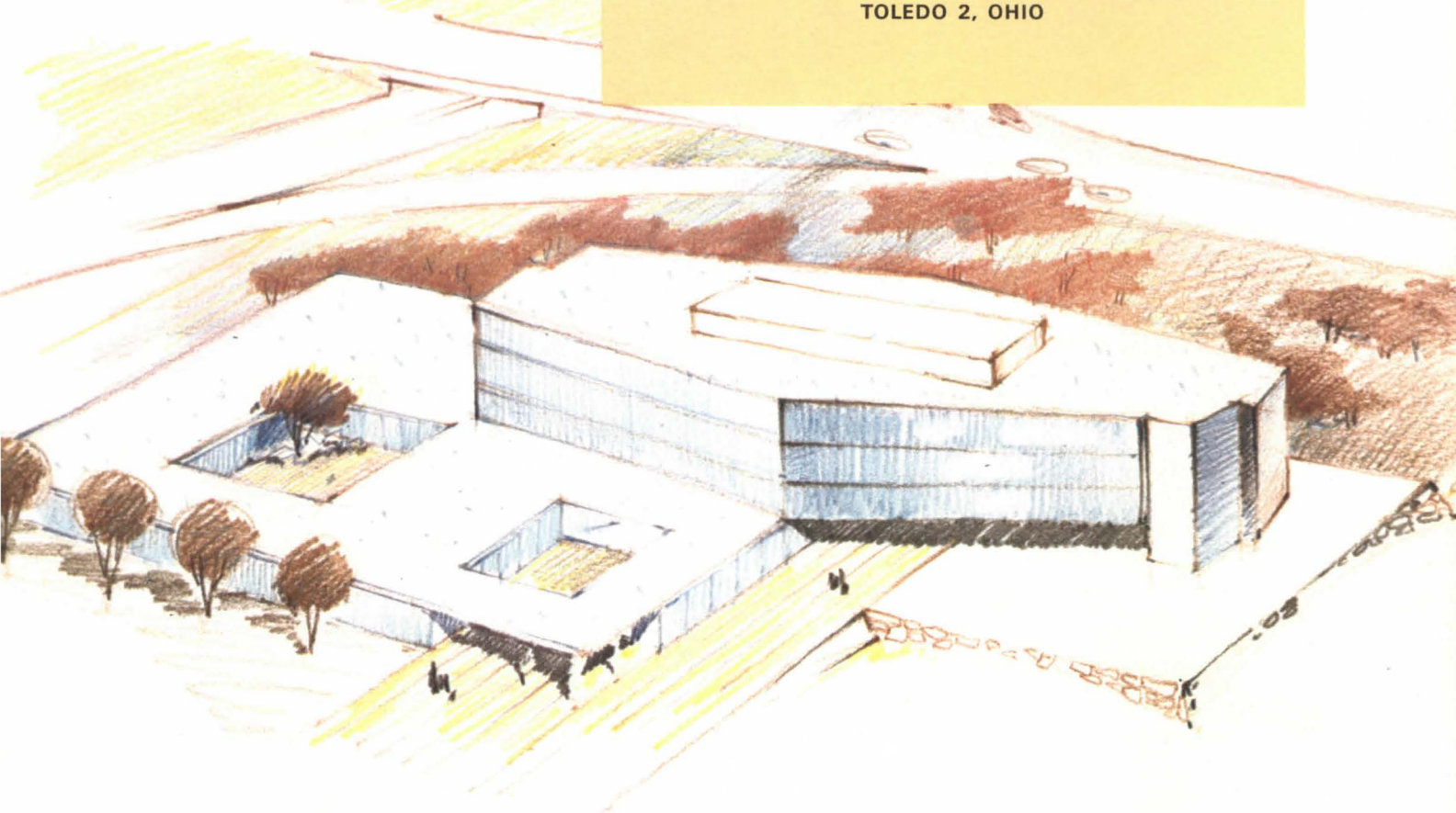
designed to grow with the community

Architect: T. Marshall Rainey, A.I.A.
Richard Hawley Cutting & Assoc., Inc., Cleveland, O.

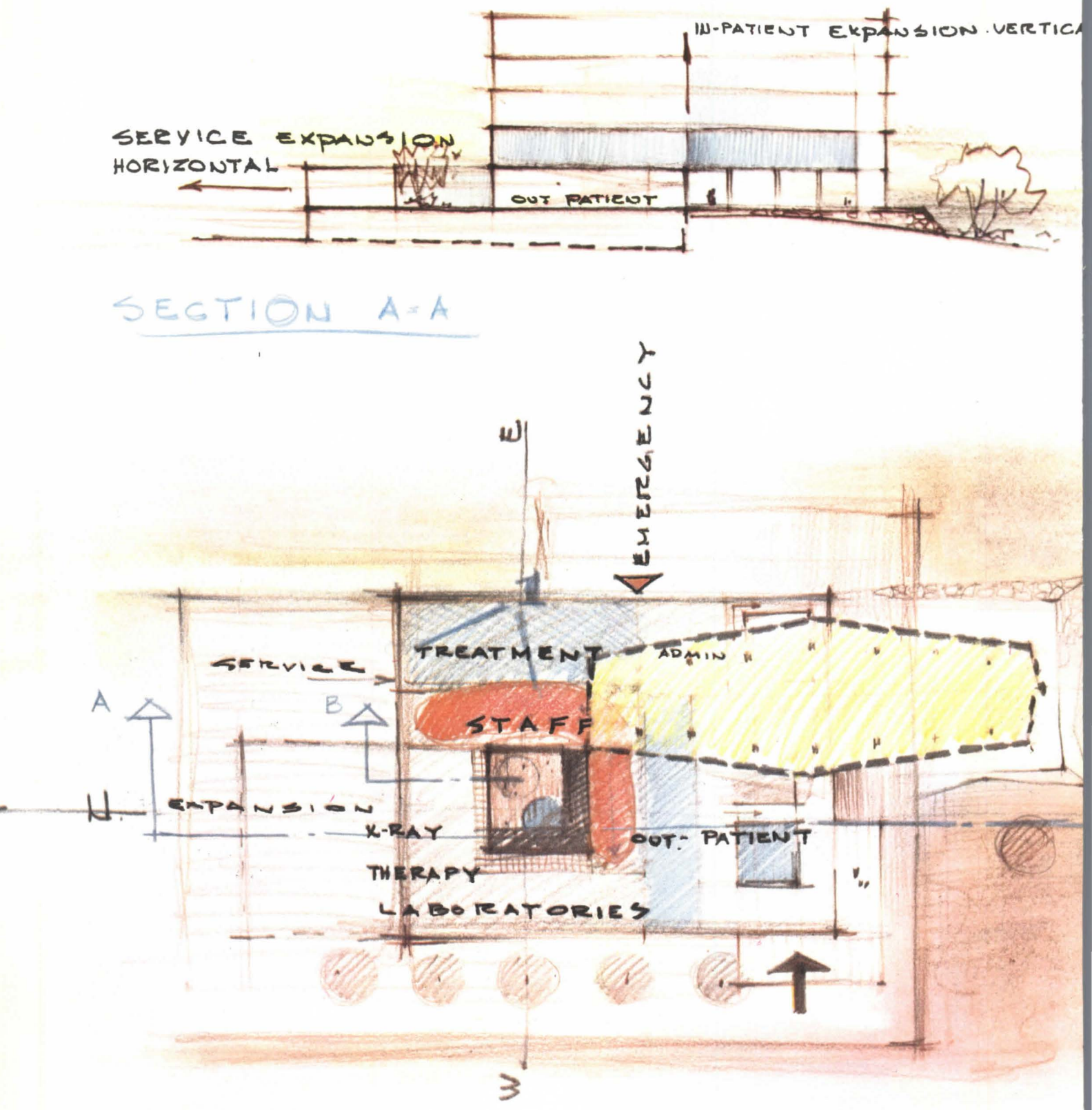
The suburban hospital, today, must be designed for flexible expansion. At first, its function is to supplement, not duplicate, the metropolitan medical center. But as modern highway systems develop, the territory it serves grows larger. The hospital must grow too, and expand its services, to keep pace with the ever-increasing needs of the community.

We asked Architect Rainey how such a hospital could be designed. He shows us on the following pages. Glass plays a big role in his plans. And Libbey·Owens·Ford makes it thoroughly practical. Because Libbey·Owens·Ford makes a particular kind of glass for almost every design situation.

Libbey·Owens·Ford
TOLEDO 2, OHIO



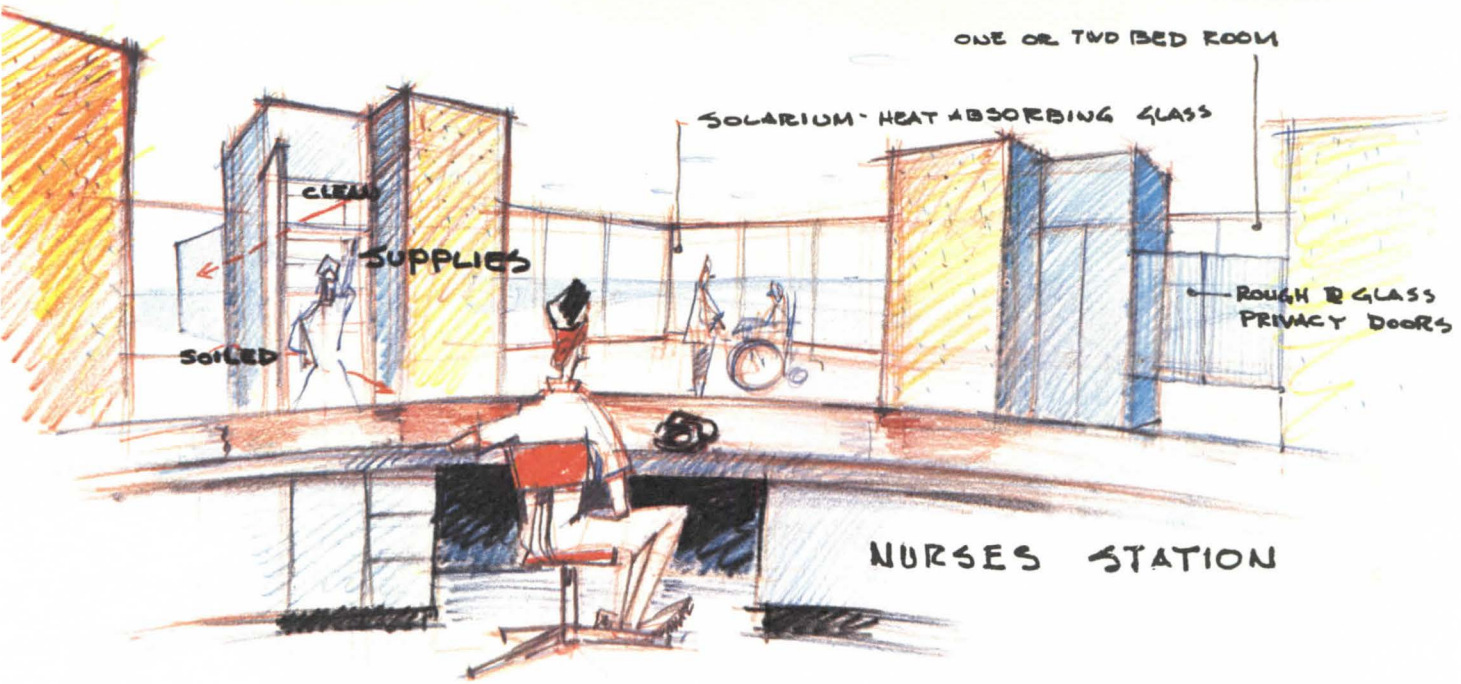
This is the Open World of L·O·F glass

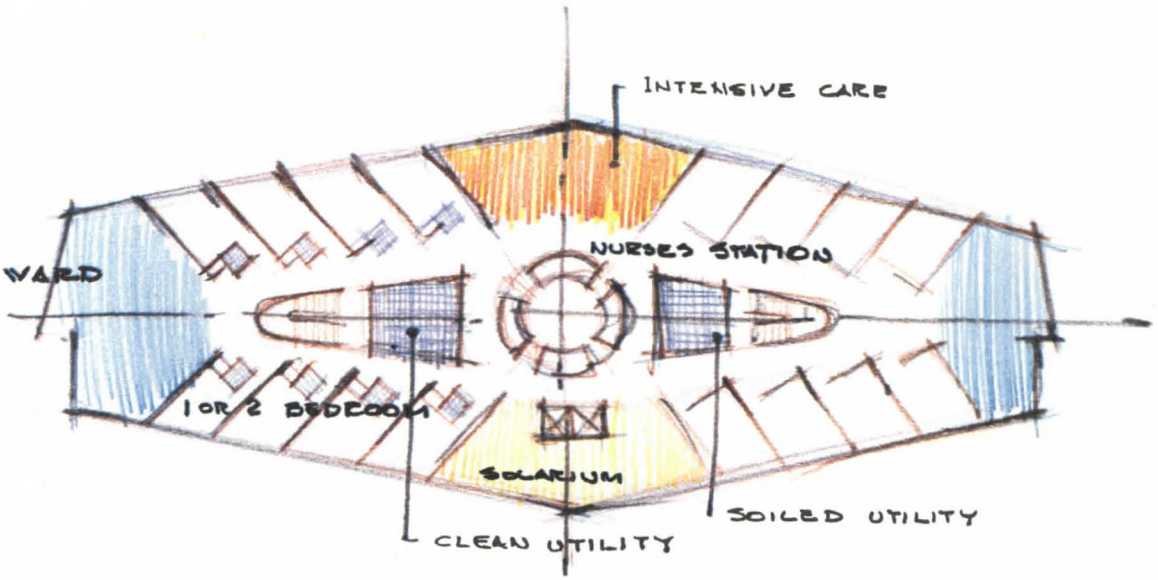


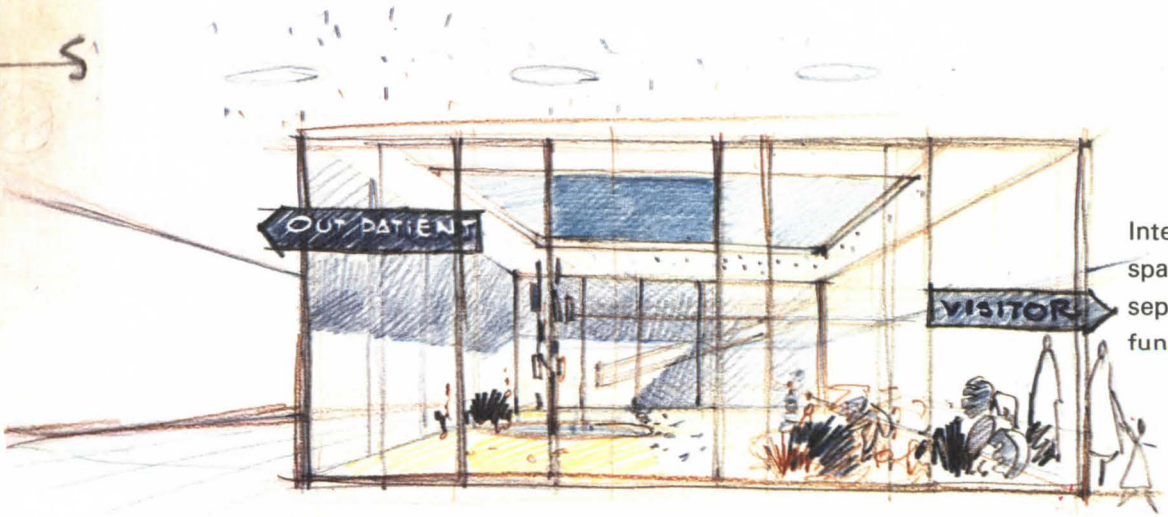
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L·O·F GLASS

The success of any building, particularly a hospital, depends on the establishment of clear traffic patterns. In this case: for the staff, patients, visitors and service. From the lobby, outpatients and visitors take different corridors. Interior courts define and separate varied functions. Each bed floor has a central work core which reduces staff labor and steps.







Interior courts or "breathing spaces" help define and separate varied hospital functions.

Patients' rooms have large, wall-to-wall windows so they can enjoy the Open World around them. These are glazed with *Thermopane*® insulating glass for heating and air-conditioning economy. And *Parallel-O-Grey*® in the outer pane reduces sun heat and glare. Rough Plate glass in bedroom doors provides privacy, and transmits daylight to the corridors.

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L·O·F makes a particular kind of glass for every purpose in Open World design. *Thermopane* insulating glass for heating and air-conditioning economy. *Parallel-O-Plate®*, twin ground for clearest visibility. *Parallel-O-Grey* plate glass, *Parallel-O-Bronze* and blue-green Heat Absorbing plate glass for windows with a sun or glare problem. Rough Plate glass for translucent partitions. *Tuf-flex®* tempered plate glass or laminated *safety* glass for areas where extra impact resistance is needed.

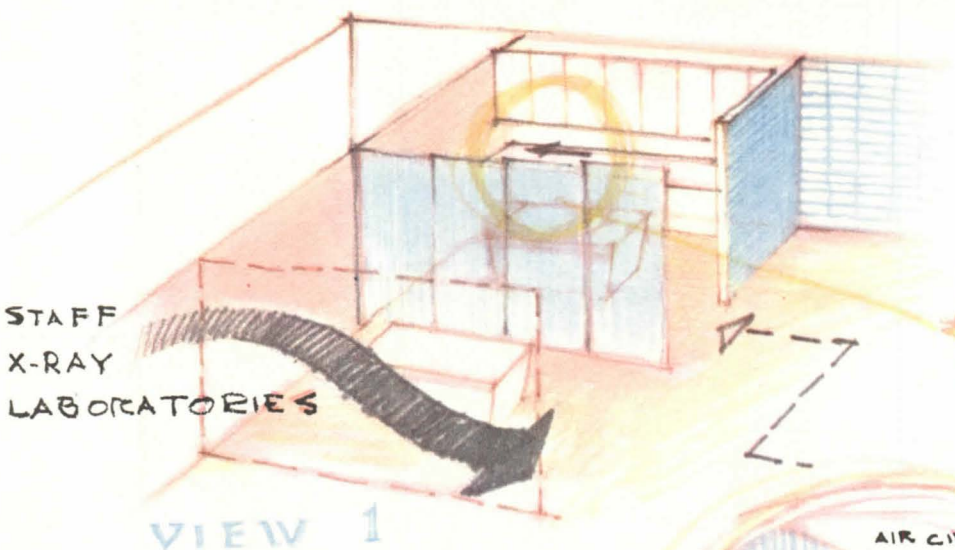
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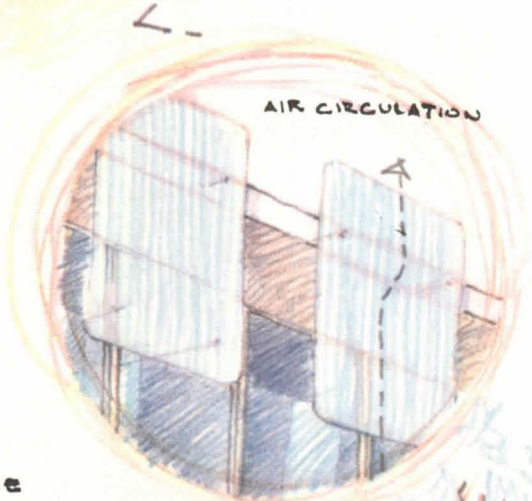
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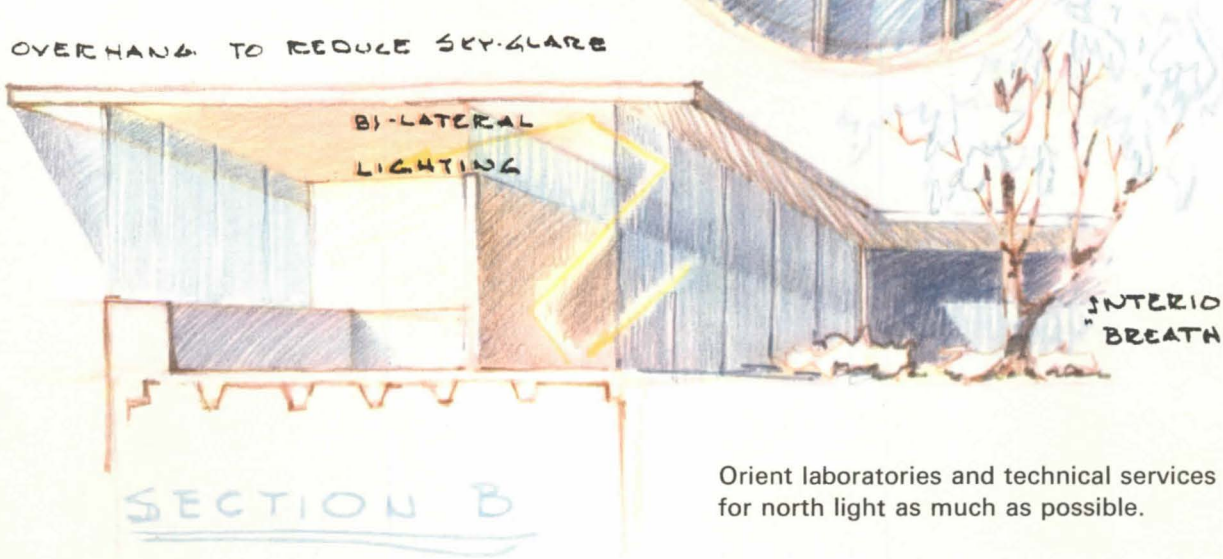
TOLEDO 2, OHIO



Obscure sliding tempered glass doors permit entire emergency department to operate as unit.



Heat absorbing glass panels on east and west elevations provide shading from sun.



Orient laboratories and technical services for north light as much as possible.

LITHO IN U

NO. 11

flat plates

a.i.a. file: 4-a

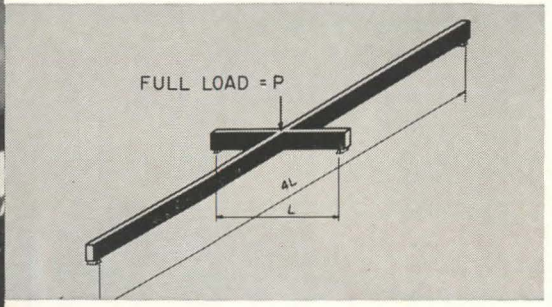
Prepared as a service to architects by Portland Cement Association

Clip along dotted line

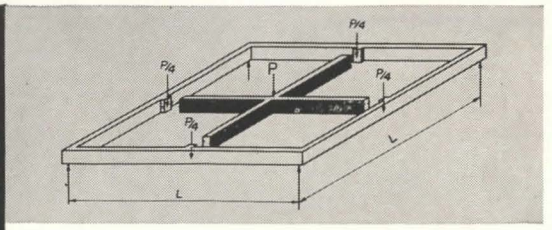


Harbor Master's Building, Lake Pontchartrain, La. First Honor Award 1962 A.I.A. Gulf States Competition. Architects: Henry G. Grimball, A.I.A., H. M. Favrot, Jr., A.I.A., New Orleans. Photograph, Frank Lotz Miller.

Two-way floor systems are designed to carry loads in two directions. Whether a slab acts as a one-way or a two-way slab depends solely on the dimensions of the panel, as shown below:



The action of a one-way floor is typified by this framework which has a high ratio of long to short span.

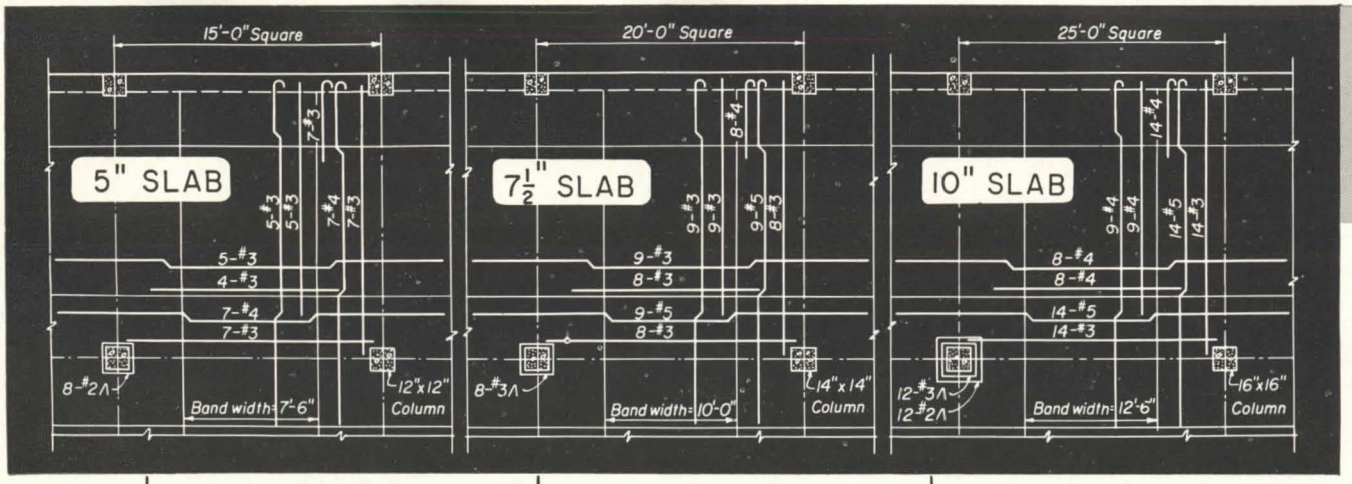


The action of a two-way floor system may be compared to that of a frame in which the ratio of long to short span is 2 to 1 or less.

Two-way flat plates are economical for medium to heavy loads on spans up to about 30 feet. They present a smooth undersurface as the photo shows. In the accompanying tables, material quantities for concrete, reinforcement and formwork are stated in units per square foot of panel with no allowance for waste or breakage.

Designs are based on a concrete strength of f'_c=3,000 psi; a steel stress of f_s=20,000 psi; and the use of A305 reinforcing bars. Write on your letterhead for further free information. (U.S. and Canada only.)

FLAT PLATES (50 PSF LIVE LOAD)



Item	Concrete (cu.ft.)						Reinforcement (lb.)						Formwork (sq.ft.)					
	15x15		20x20		25x25		15x15		20x20		25x25		15x15		20x20		25x25	
	Total units	Units per sq.ft.	Total units	Units per sq.ft.	Total units	Units per sq.ft.	Total units	Units per sq.ft.	Total units	Units per sq.ft.	Total units	Units per sq.ft.	Total units	Units per sq.ft.	Total units	Units per sq.ft.	Total units	Units per sq.ft.
Slab	94	0.42	250	0.62	521	0.83	419	1.86	996	2.49	2045	3.27	225	1.00	400	1.00	625	1.00

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Continued from page 160

technical inquisitiveness of Wright is not there, nor the interest in new form. Stone, however, was one of the best early contemporary architects and contributed a great deal to a new architecture for America. He was one of the first to break with the concrete or glass box of the International School and seek a more indigenous statement for our own country. But although each commission was a new project demanding new solutions, he was constantly looking for a personal signature, for a statement, in each phase of his life. At last he has found his personal style, and he is refining it. This, of course, is a questionable pursuit. Will it lead to constant repetition? Will it stultify him?

Saarinen also was searching for a statement, as we all are, but there was great excitement in the process, and each job developed its own shape and character. Saarinen, had he lived, might have arrived at a repeated aesthetic, but the direction seemed to be toward more and more diversity.

With the limitless opportunities afforded Ed Stone at the present, it is a wonder he is not still busy in the pursuit of new forms and new character, of ideas ahead of us all.

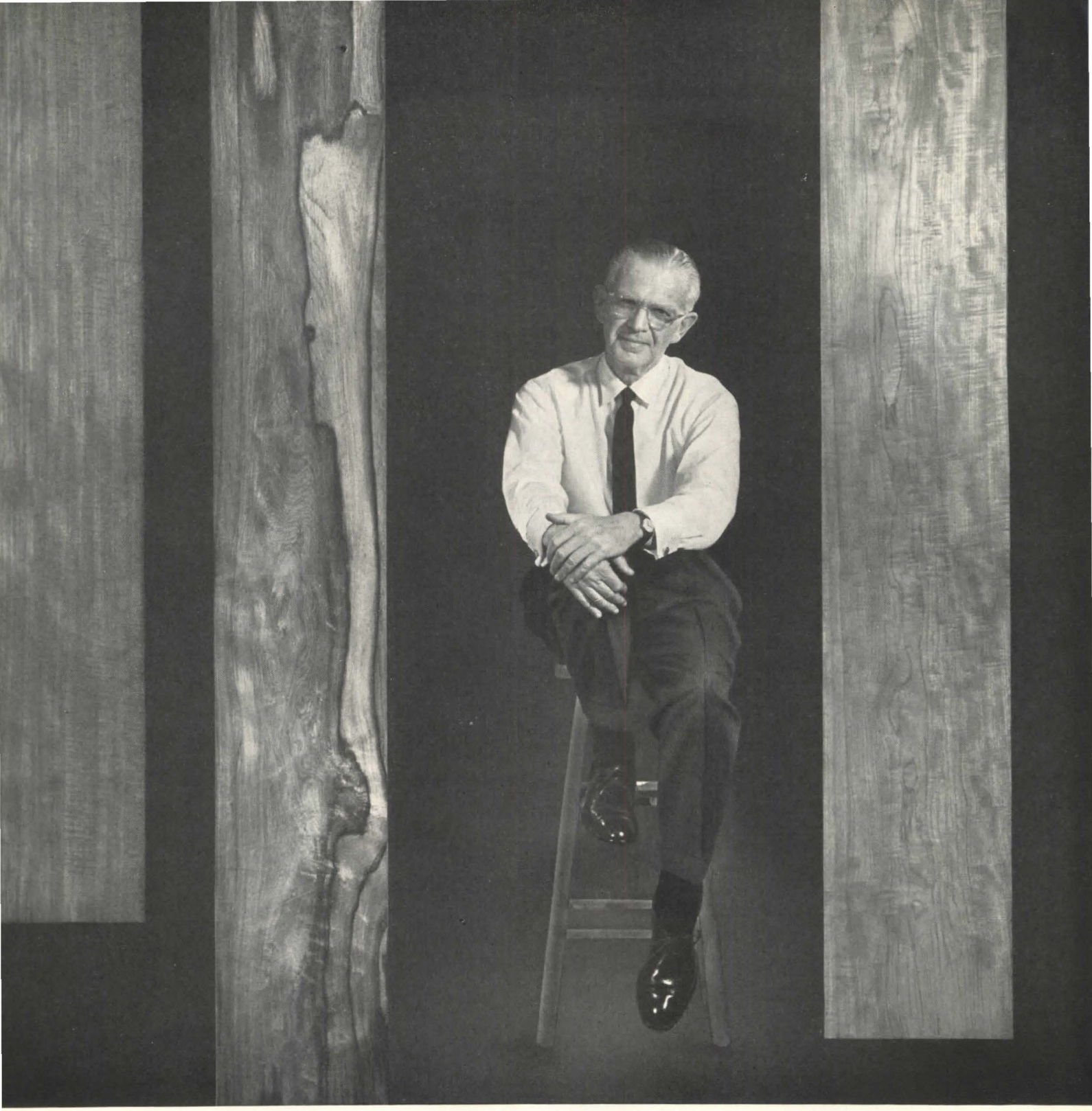
I have no personal ax to grind with Stone. He was the best man I ever worked for, and treated me well throughout our association. But I feel he has a broader responsibility, and that a great talent is being withheld from all of us. I am eagerly awaiting Volume II.

Paradoxes and Possibilities

PHOTOGRAPHING ARCHITECTURE AND INTERIORS *by Julius Shulman. Introduction by Richard J. Neutra. Published by Whitney Library of Design, 18 E. 50 St., New York 22, N. Y. (1962, 154 pp., illus. $15)*

The question of how valid photographs are as a means of representing architecture has often been discussed. It is this reviewer's conviction that photography can never adequately convey the intrinsic qualities of a three-dimensional object; it is never properly descriptive; it provides an instant communication of questionable effectiveness. In the case of architecture, in which the fourth dimension of time is so crucial an element, photography often produces a paradoxical distortion of the reality of a structure or a building, making out of it an aesthetic image divorced from the existence of the architectural work.

Undoubtedly the personality of the



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In the new Bankers Trust skyscraper on New York's glistening Park Avenue, Henry Dreyfuss, accomplished industrial designer, makes extensive use of fine hardwoods in conference rooms, private offices, executive restaurants and other prominent areas for wall panelling as well as for furniture. He did this, too, in the interiors he recently created for the United California Bank in Los Angeles. Mr. Dreyfuss, like most designers and specifiers, is a continuous user of fine hardwoods...the most responsive materials at your disposal. If thoughts of glorious highlights, subtle shadows, tone and texture make your imagination soar—you're thinking hardwood. Good. May we proffer a prediction? Your next project will be that much more successful with hardwood.

SPECIAL BULLETIN ON NEW YORK WORLD'S FAIR, 1964-65: Over 600 students from 59 schools and universities initially entered the Furniture Design Competition sponsored jointly by Fine Hardwoods Association and the Pavilion of American Interiors. Winning designs will be shown at the Fair in the Fine Hardwoods Association exhibit in the Pavilion of American Interiors. Inquiries from senior and graduate student designers are invited. Entries must be in by August 1, 1963.

FINE HARDWOODS ASSOCIATION / 666 LAKE SHORE DRIVE, CHICAGO

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photographer involved is very important in such a consideration; but more important is the fact that photography is an artistic realm in its own right, with its own techniques and aspirations, and with the photographer an artist. As such, he should never really "subjugate his photography to the design," but rather have the *right* photograph for that design. He must actualize an artistic event in which architecture is the starting point.

Architectural photography, in a well-defined visual representation, tends to influence the ways of seeing architecture; in a similar way, but with marked differences, painting has influenced the visualization of architecture: the relation between cubism in painting and architecture of the early periods of the modern movement is still the subject of attentive studies by art critics.

The process of abstraction in architecture became more sensitive with photography: glorification of bare volumes and extensive surfaces, straight or accidental views, wide angles getting in a view that cannot possibly be seen or sensed in the architectural environment, apocalyptic landscapes, incredibly dark skies, and impossible lights flooding every intimate corner of a room. And above all, the static focus, which is so incongruous in terms of the reality of architecture—its order, its realizations, its drama, its plastic depths, its atmospheric relations, its human participations.

The advantage of realism, even in photography, is that at least if there is nothing to say, it shows it.

Julius Shulman is an architectural photographer who does not abdicate his artistic personality in any circumstance, and all his photos are works of art. In this book there are memorable pictures—the Palm Springs house of Neutra, the Wayfarers' Chapel of Lloyd Wright, Maybeck's Christian Science Church at Berkeley. An important chapter, dedicated to a specific photographic case study, is highly instructive; here the relation of interior to exterior in a building is accurately represented. The text also contains an interesting introduction by Richard Neutra and a good chapter on the profession of architectural photography.

Shulman's recommendation that the designer should become his own photographer is a wise one. In fact, it is in the process of design that this suggestion seems most appropriate and useful. During the elaboration of study models, a continuous check by means of photographs is extremely valid: to study the relationship of the building with other structures, and with other aspects of the urban setting; to explore the effect of changing light on the surface of a building and of shadows cast in the different hours of the day. The camera offers this possibility of a good visual analysis from preestablished points of view.

ROMALDO GIURGOLA
Mitchell/Giurgola, Associates
Philadelphia, Pa.

A Vigorous Creativity

CONTEMPORARY ARCHITECTURE IN GERMANY, *by Werner Marschall. Introduction by Ulrich Conrads. Translated by James Palmes. English and German text. Published by Frederick A. Praeger, 64 University Place, New York 3, N.Y. (1962, 231 pp., illus. $16.50)*

Postwar German architecture has been as disappointing as it has been provocative. Many good buildings have emerged from the challenge presented by what was practically utter destruction, yet on the whole, the average level of creativity in

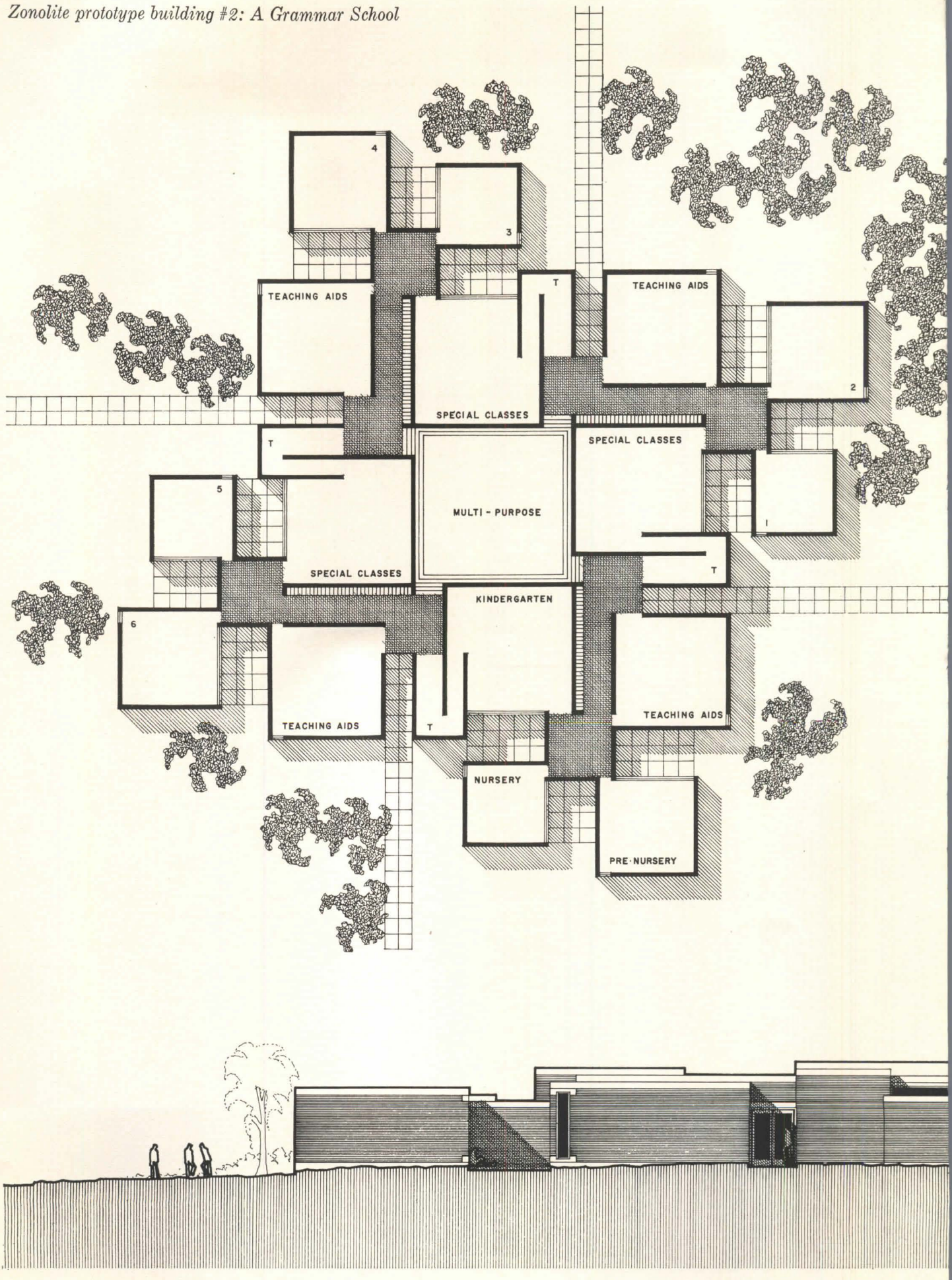
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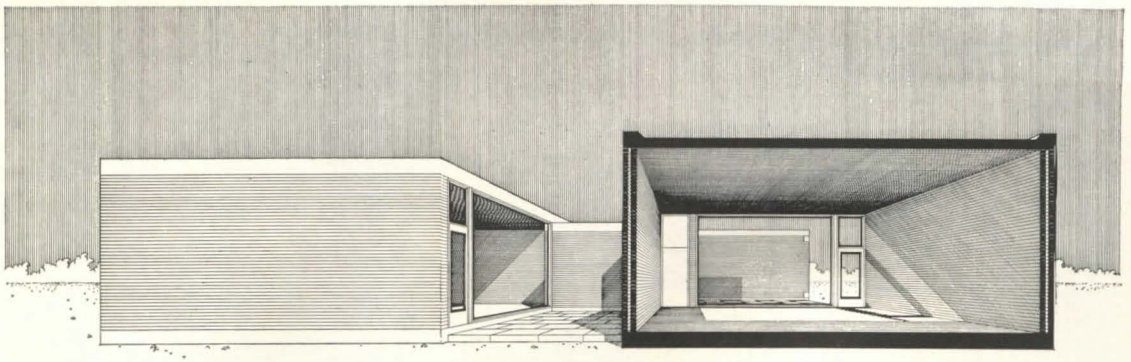
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harper

Zonolite prototype building #2: A Grammar School





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This grammar school was commissioned by Zonolite, designed by Stanley Tigerman of Tigerman & Koglin, Chicago architects, and engineered by Norman Migdal, Chicago consulting engineer.

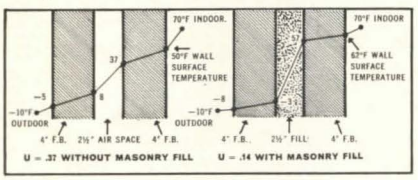
It demonstrates the different ways that Zonolite Masonry Fill Insulation contribute to the economy and comfort of a brick cavity building, some rather unexpected.

The initial cost of the building is reduced in two respects by filling the cavities with this product.

First, the interior surfaces of the walls can remain unfinished, because conventional insulation on the inside is not necessary for comfort. And second, the cost of the heating plant can be reduced somewhat because a smaller boiler (see chart) can be used.

The heating costs are reduced 17.6%; a savings amounting to over $600 annually.

Comfort is increased to a considerable degree. Note the difference in surface temperatures of the interior walls.



The water repellent nature of the material keeps interior walls dry as well as warm.

Another aspect of comfort derives from the sound dampening capability of the material . . . it reduces the loudness of sound transmitted through the walls 20% to 31%.

Contrast all these advantages with the approximate installed costs of the material for this cavity size; approximately 10¢ per square foot.

The installed costs are low for two reasons. One, the initial cost is low. Two, installation is easy and fast. The material just pours out of the bag into the cavity.

For more information about this remarkable insulation, write Department PA-73 for Bulletin MF-68. Zonolite Division, 135 South LaSalle Street, Chicago 3, Ill.

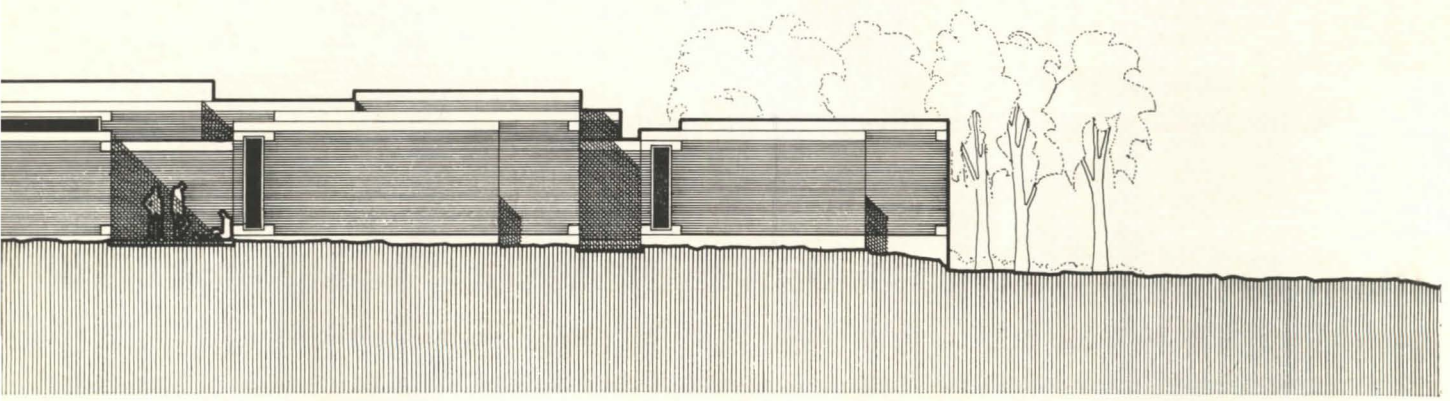
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1. *Higher wall surface temperature reduces body radiant heat exchange, and minimizes wall surface downdrafts. (See chart at left for wall surface temperatures.)*
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**Based on six 113 degree days. 10 cents per therm, gas boiler. 45 hrs./week ventilation system operation.*



For more information, turn to Reader Service card, circle No. 376

Continued from page 170

design has been lower than one would expect. In a lucid introduction, Ulrich Conrads, Editor of the architectural magazine *Bauwelt*, provides explanations.

In the period immediately following the currency reform and the establishment of the Federal Republic of Germany, construction was necessarily restricted to the mere providing of shelter — the replacement and repair of demolished living quarters and the building of new units for large numbers of refugees and newly created households. When the national economy once again regained vitality, this first period, which extended roughly from 1950 to 1955, was followed by a sudden building boom that unfortunately proceeded without the guidance of strong architectural leadership or enlightened official direction.

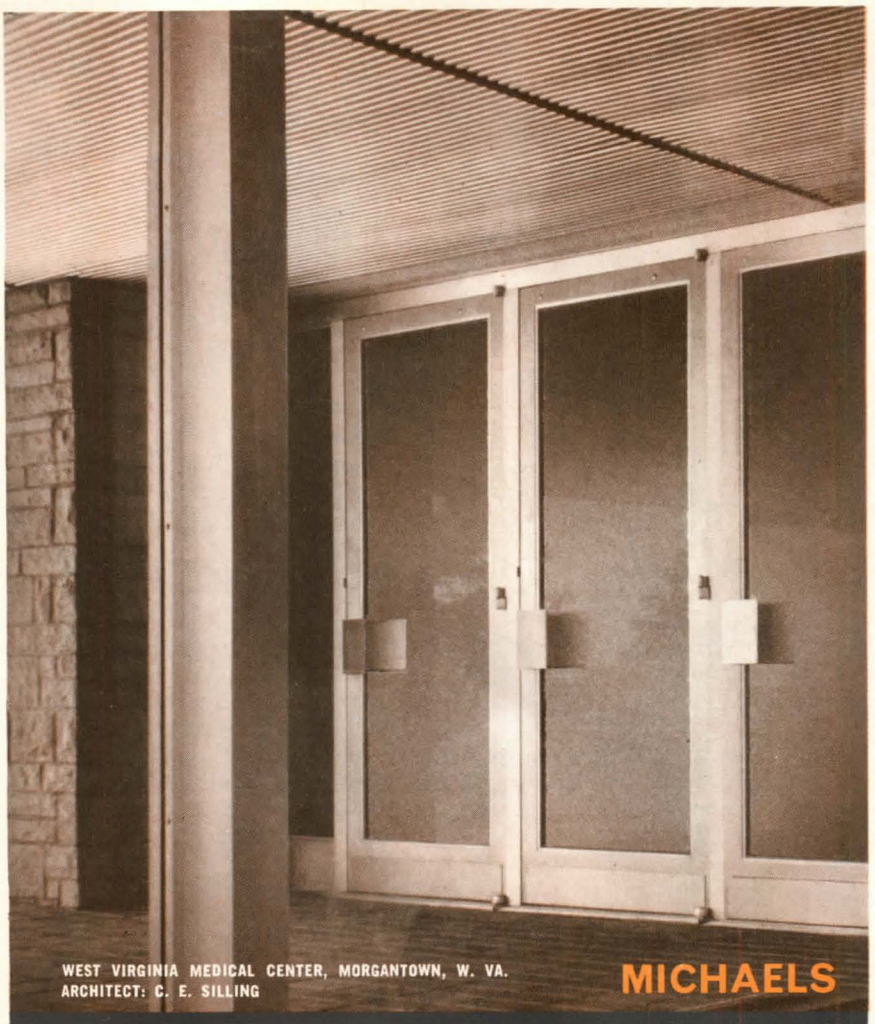
"Thus postwar Germany had two forms of building: one which, under the most stringent financial and material restrictions, but protected from abuses by compulsory technical building regulations, produced from 1953 a yearly average of 550,000 homes; and another which, thanks to the boom, expended its surplus funds on a host of luxurious, or apparently luxurious, objects. From 1950 the architects of Germany were caught between two fires."

In other words, the emphasis during both periods was on construction rather than architecture. The formation of divergent architectural camps, the lack of an over-all framework for reconstruction, a dominating emphasis on economics, and, in many instances, selfish interests — which, incidentally, are problems as evident in the U.S. as in postwar Germany —resulted in the construction of a quantity of real estate but not necessarily a coherent contemporary architecture.

The turning point, Conrads feels, has now arrived, and though he suggests that the present work "gives neither cause for special pride, nor for diffidence," he does see, as he guides the reader through the illustrated examples of the book, an emerging *Contemporary Architecture in Germany*. Recent schools, public buildings, industrial buildings, and, in particular, some of the churches, are showing the way. The work of such architects as Hans Scharoun, Werner Duettmann, Otto Senn, Egon Eiermann, Sep Ruf, Frei Otto, Dieter Oesterlen, and especially the late Rudolf Schwarz, does fortunately exemplify a vigorous creativity and a renewed concern for the townscape, which makes one suspect that German architecture will provide much of interest in the not-too-distant future.

I.M.R.

Continued on page 181

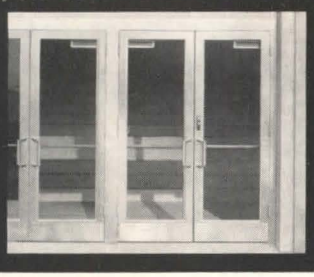


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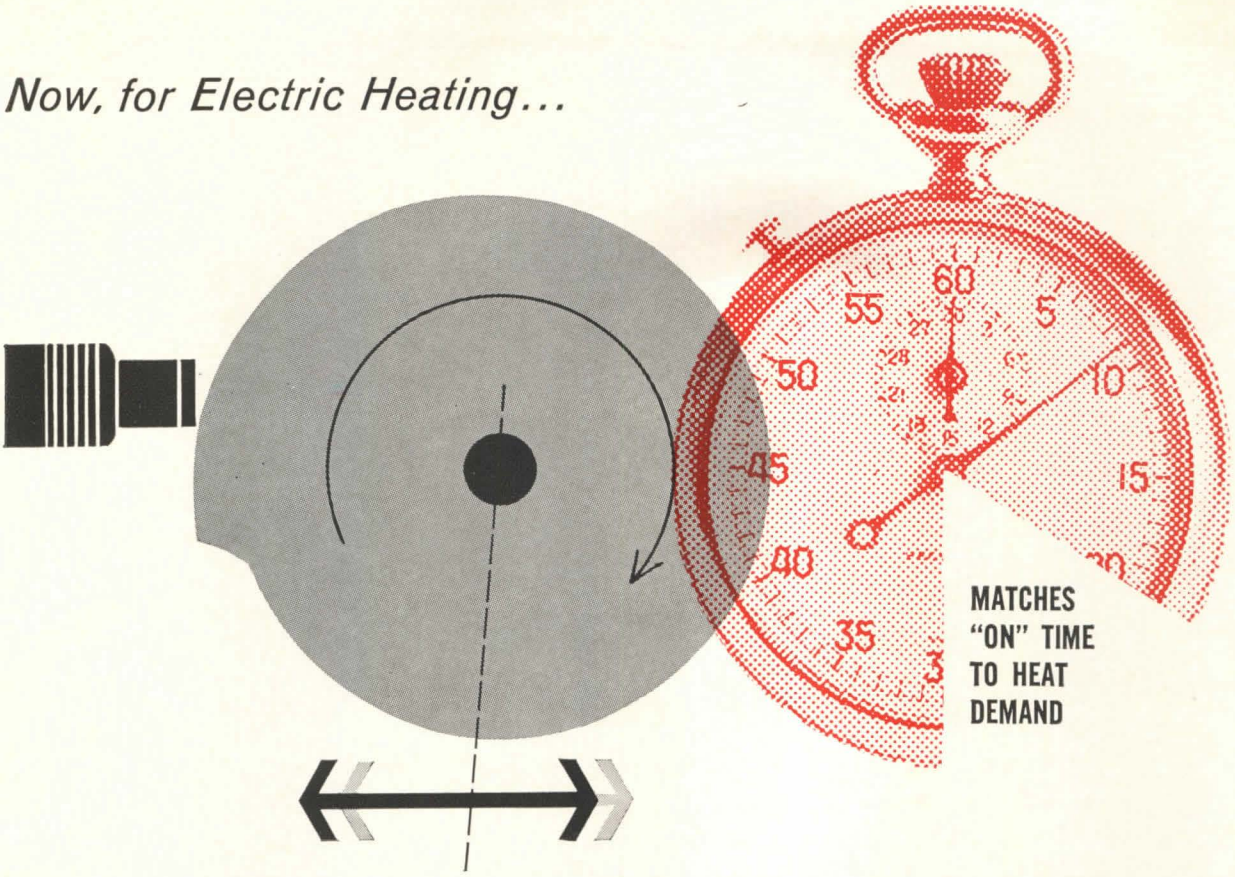
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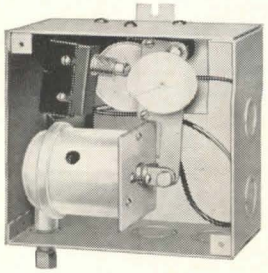
Now you can provide the finest pneumatic proportional control for electric heating systems . . . and at a cost well below other, less efficient methods!

The key component is the ingenious new Johnson G-182 Time Proportioning Switch. Through a simple arrangement of a switch, a revolving cam, and a pneumatic piston operator, the G-182 automatically proportions the "ON" time of electric heating elements in response to the pressure output of any Johnson pneumatic thermostat. The G-182 actuates a heavy duty R-265 Electric Contactor which directly controls the heating elements.

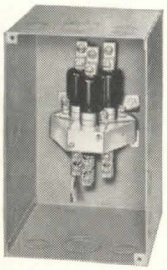
These compact new components offer the capacity and versatility required for any electric heating application. They require less space than most other controls, and they install faster and easier, with a minimum of wiring.

Equally important, design economies have solved the high-cost problem of proportional control.

Team up the G-182 and R-265 with the new Johnson Series T-4000 Thermostats for control that's as modern as electric heating itself. Ask your local Johnson representative for details today, or mail the coupon. It's another exclusive new control idea from Johnson, world leader in automatic control systems. Direct branch offices in principal cities.



G-182 Time Proportioning Switch. Furnished with 115 or 208/230 V 50/60-cycle synchronous motor (25-cycle also available). Positive acting switch rated at 345 VA. Spring ranges 5 to 9 and 8 to 13 psi.



R-265 Electric Contactor. Coils available for 115, 208, or 230 V 50/60-cycle operation (25-cycle also available). Furnished with one or three mercury poles in 30, 60, or 100 amp models at 115 V A.C.

JOHNSON CONTROL
AUTOMATIC CONTROL SYSTEMS

JOHNSON SERVICE COMPANY • Milwaukee 1, Wisconsin

Please send complete technical information on the new G-182 Time Proportioning Switch and R-265 Electric Contactor for electric heating control.

Name.....

Title.....

Firm.....

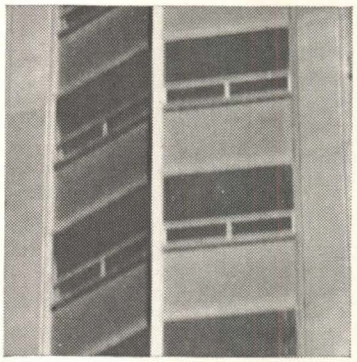
Street.....

City.....Zone.....State.....

1285

For more information, turn to Reader Service card, circle No. 335

This 46-story hotel opening June 26, 1963 is owned by Rock-Hil-Uris, Inc., a joint investment of Rockefeller Center, Inc., Hilton Hotels Corporation, and the Uris Building Corporation. Architect: William B. Tabler, N.Y. Consulting Architects: Harrison & Abramovitz, N.Y. Details on this LUPTON job are in the 1963 Michael Flynn Manufacturing Co. Curtain Wall catalog.



NEW HOTEL PAR EXCELLENCE GLEAMS ALOFT WITH LUPTON CURTAIN WALL

The New York Hilton at Rockefeller Center is a self-sufficient oasis, housing a full array of shops, services, and vast hotel facilities that are among the most advanced in the world.

Its ultra-modernity is reflected in the specification of LUPTON curtain wall . . . 335,000 square feet of it. Light gray anodized aluminum frames soaring panels of blue-tinted glass. The desired effect is achieved . . . a gleaming structure with towering vertical lines.

The choice of LUPTON also assured efficient, cost-cutting fabrication and installation. Builders could bank on speed, accurate fit, and economy. Plus "total responsibility" that sees every LUPTON job through all the way.

This thorough-going workmanship goes hand-in-hand with skill in curtain wall design. LUPTON can interpret and fulfill the most exacting creative demands . . . bring your architectural concepts to fullest realization. As for reliability, that's attested to by a solidly established reputation going back 25 years.

For further LUPTON advantages, see Sweet's Architectural File (sections 3 & 17) for the Michael Flynn Curtain Wall and Window catalogs. Talk to your local LUPTON man, as well . . . or write us direct.

LUPTON

Main Office and Plant: 700 E. Godfrey Ave., Philadelphia 24, Pa. **West Coast Office and Plant:** City of Industry (Los Angeles County), California. **SALES OFFICES:** San Leandro, California; Chicago, Illinois; New York, New York; Cleveland, Ohio; Dallas, Texas. Representatives in other principal cities.

Michael Flynn Manufacturing Company

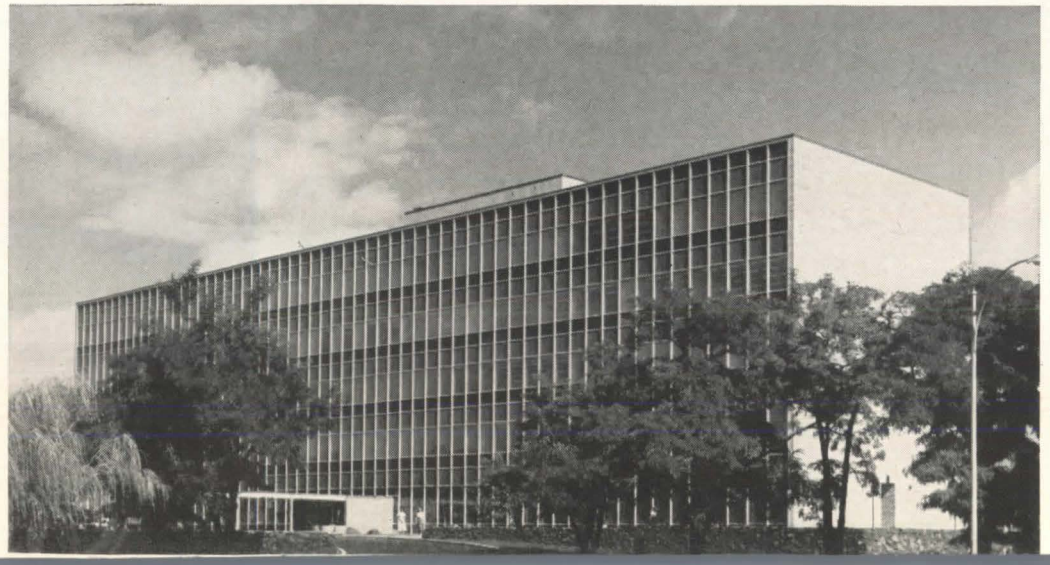
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A. C. HORN

WATERPROOFING PRODUCTS

Keeping water out from the ground up at Washington Water Power service center



DAREX HORN
A. C. Horn Products

SINCE AS FAR BACK as McKinley's administration, A. C. Horn has been another way of saying quality and dependability in construction and maintenance products.

Horn product lines you hear most about include Caulks and Sealants, Floor and Surface Treatments, Waterproofing Products, Industrial Coatings, Admixtures, Adhesives and Bonding Agents.

There are more than 200 time-tested and performance-proved products available from Horn. Chances are you will find one specifically designed to meet your particular construction or maintenance requirements. The man from Horn is ready to work with you — contact him through the nearest regional office listed below.



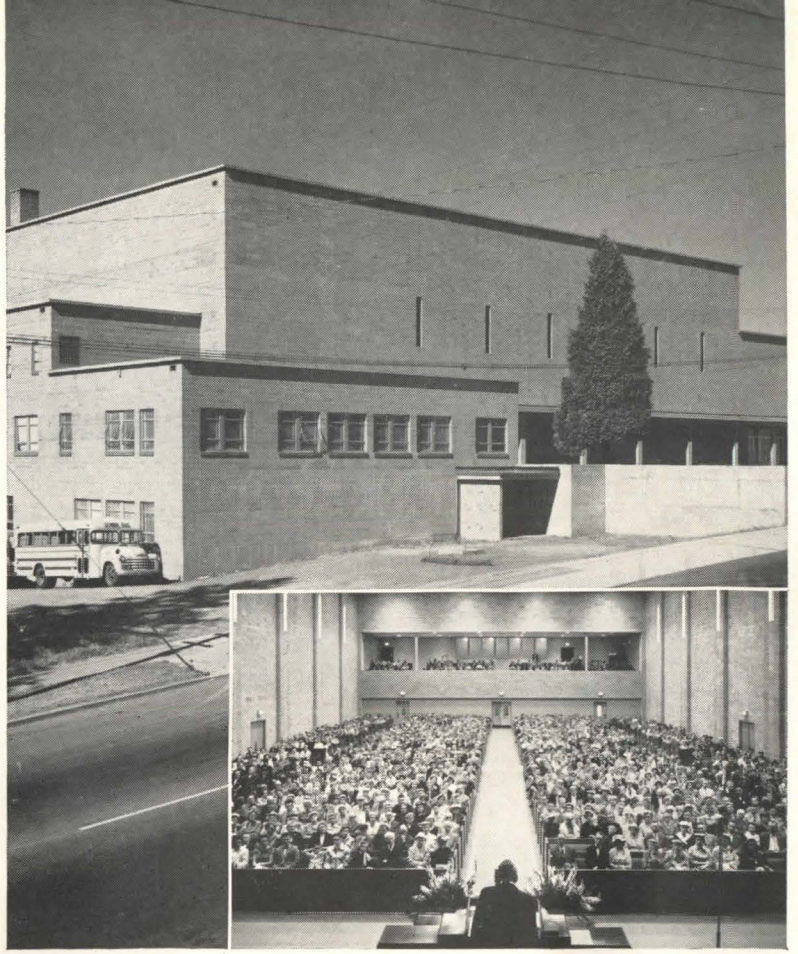
This $7,500,000 super service center of the Washington Water Power Company at Spokane marks an eloquent A. C. Horn testimonial. Inside and out, above and below-ground, eleven Horn products were used in construction, including three different waterproofing agents. Horn Dehydratine #4 was called on to provide a lasting barrier against water infiltration on exterior, below-grade masonry walls. This heavy-bodied asphalt coating develops maximum bond to "green" masonry . . . dries to a hard, elastic film unaffected by lime in cement. Dehydratine #22 silicone water-repellent was used to waterseal above-grade masonry, stop efflorescence and minimize staining and spalling. It also helps to keep interior dampness out. Hydratite Plus water-repellent admixture was specified to reduce mortar shrinkage and help assure tighter joints. General Contractors: Johnson, Busboom, Rauh. Architects: Kenneth W. Brooks & Bruce H. Walker. Structural Engineers: Wm. W. Wilson.



Dehydratine #22 cures efflorescence at Isolation Hospital. To immunize against efflorescence and other masonry surface problems at Isolation Hospital, Essex County, New Jersey, Dehydratine #22 was just what the doctor ordered. This improved silicone water repellent reduces water absorption up to 230 per cent better than other repellent treatments, after 20 freeze-thaw cycles. Its smaller molecules penetrate deeper, shut water out but won't trap vapor in. Bleeding-through of masonry salts is checked. Staining and spalling are minimized. Interior dampness is substantially reduced. Dehydratine #22 can be painted over. A single application lasts at least 10 years.



Metalon gets waterproofing verdict at Denver Courthouse. Doing justice to below-grade waterproofing of the new, block-long Federal Office Building and Courthouse at Denver, Colorado was a clear case for Horn Metalon. In accordance with specifications, 23,000 pounds of this metallic waterproofing agent were used to guard against water seepage. Metalon is a mixture of powdered iron and oxidizing chemicals used to provide heavy-duty water resistance on concrete or masonry. Premier Waterproofing Company of Denver handled the Courthouse application. General Contractor: Arthur Venneri Company, Westfield, New Jersey. Architects: Fisher and Davis, and James Sudler Associates of Denver.



Hydratites provide "built-in" water check at Central Bible School. The handsome new Central Bible School at Portland, Oregon is built to stay that way through rain, sleet and snow, thanks to Horn Hydratite Plus and Hydratite Powder. Hydratite Plus is a water-repellent admixture used in the mortar mix to minimize shrinkage, stop leakage at joints and control efflorescence. It also makes mortar more workable and reduces absorption of mix water by porous bricks or blocks. Hydratite Powder is an integral water-repellent admixture used in concrete, cement stucco and cement plaster mixes. It forms a built-in barrier that protects building interiors against water seepage. It also helps improve workability of the mix. Horn Dehydratine #22 silicone water-repellent was used on exterior masonry surfaces to wrap up the waterproofing job handled by Williamson and Bleid. General Contractor: A. V. Peterson. Architects: Church, Newberry, Rohr & Shuette.

For more information, turn to Reader Service card, circle No. 331

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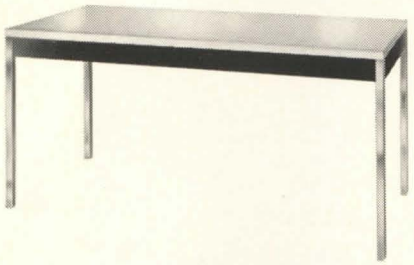
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Cincinnati 12, Ohio, A Division of Globe-Wernicke Industries, Inc.

Blending office efficiency with beauty converts clients into friends. Why not let Globe-Wernicke Office Planning help you?

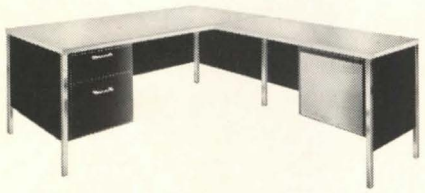
Efficiency has approached perfection for many companies — in the factory. Further emphasis in this area nets only diminishing returns. Still, profits are squeezed. Where next can management turn for more efficiency?

You hold a key that can win undying gratitude among your clients. Most offices run at only sixty per cent efficiency. And offices are becoming a major part of the cost of running many businesses.



So, isn't it logical that you think "efficiency" when designing a client's offices? Globe-Wernicke and its dealers can show you how expert office planning can mean saving a client five per cent to forty per cent of the time and money generally lost in inefficient offices.

We are ready to help you make these savings materialize. We've got years of



experience in doing just this. We invite you to use our experience. Obviously, we want you to also consider our furniture. Write to Globe-Wernicke, Office Planning Service, Department P7, Cincinnati 12, Ohio.

GLOBE WERNICKE

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Continued from page 174

Survey Up-Dated

SIMPSON'S HISTORY OF ARCHITECTURAL DEVELOPMENT. VOLUME III: GOTHIC ARCHITECTURE, *by Cecil Stewart. Published by David McKay Co., Inc., 119 W. 40 St., New York 18, N. Y. (1961, 239 pp., illus. $7.50)* VOLUME IV: RENAISSANCE ARCHITECTURE, *by Quentin Hughes and Norbert Lynton. McKay. (1962, 428 pp., illus. $12.50)*

Gothic Architecture is the third in a series of five volumes, providing a revised, expanded version of the original three volumes published between 1905 and 1911 by Frederick Moore Simpson. A noted architectural historian, Simpson founded the School of Architecture at the University College of Liverpool, and in 1903 occupied the Chair of Architecture at London University. Intended principally as a reference book for the student rather than the specialist, this is a well-written, comprehensive study of the development of Gothic architecture in the Western World. New facts authenticated by modern historical research have been added, as well as the last chapter, "Secular Architecture."

Volume IV of *Simpson's History* is in two parts. The study of Italian architecture from the High Renaissance in Florence and Rome to the 18th Century by J. Quentin Hughes, forms Part I. Part II, by Norbert Lynton, deals with French, Dutch, and English architecture of the same period. Together, they offer the architectural student an up-to-date survey of the period.

J. H. D.

Nothing New Since Egypt

NEW FURNITURE, *by Michel Mortier. Edited by Gerd Hatje. Published by Frederick A. Praeger, Inc., 64 University Place, New York 3, N.Y. (1962, 156 pp., illus. $12.50)*

This is the sixth volume of a survey devoted to international furniture. The book itself is beautifully produced and has descriptive captions in English, French, Spanish, and German. Its 318 illustrations claim to show "the best and most interesting designs of chairs, sofas, beds, tables, cabinets, shelves, office furniture and nursery furniture by designers from 16 countries."

The brief introduction succeeds in summarizing the importance of the contents by concluding that "it is safe to say that there was nothing revolutionary or new" over what had been presented in earlier editions and that the present work

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represents a consolidation of recent trends.

The first part of the book concerns itself with chairs, and the style that predominates seems to be a neutralized internationalism. Although the designers are from many countries and diverse cultures, the forms all seem to be of similar character. Perhaps this can be explained by the fact that sitting is common to all areas influenced by Western culture. Unhappily, this volume serves mainly to prove that nothing terribly new or exciting has happened in chair design since our ancestors developed the uncomfortable thrones of Egypt.

The Editor presents plywood and plastic chairs, many of which have been shaped into attractive negative receptacles for the positive *derrière*. In more conventional chairs, there are stark forms for dining that insist on perpetuating the strange but popular notion that, to be successful, the ceremony of eating must be uncomfortable. There are chairs of rattan and bent wood, and folding chairs that seem to be variations of familiar designs, while the prize for simplification goes to some lobby chairs of steel and leather that solemnly out-Barcelona Mies' attempt of some years ago.

One of the most refreshing contributions in this section is a chair by Verner Panton of Denmark. It consists of two parts — underframing and sitting shell. The shell can be placed and fixed in any position on the underframe or can be used without it as a rocking chair.

The section on couches is disappointing. The designs vie with each other for simplicity, and difference for the sake of difference, but most of them seem all too easy to get out of.

Similarly, the group of beds suggests that cleanliness of design was given more consideration than those of man's basic activities that can best be enjoyed in bed—not the least of which are sleeping and reading.

There are some beautiful and sensitively designed examples of shelving and cabinet work, but here again the sameness leads to tedium. What in the world is wrong with painting an occasional piece, or relieving the antisepsis of children's furniture with applied decoration?

Heaven knows that furniture should be functional, but must functionalism always be expressed in starkness? Have we lost our sense of humor in the search for good design? And who decided that comfort wasn't functional?

Finally, can we learn something from the new technology that has produced advances in so many other fields, and can we be brave enough to look back to the past and learn from our mistakes? The answer of today's furniture designers, if we are to judge by this book, is "no." But perhaps, somewhere, there are designers who will answer in the affirmative. Let us hope that the Editors of the seventh edition of *New Furniture* will be able to discover some new thinking and creative solutions to one of man's most basic needs.

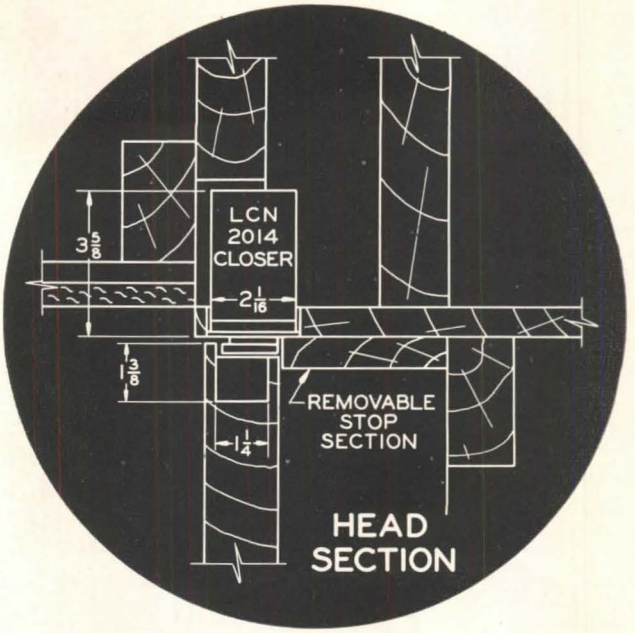
ROLF MYLLER
Architect
New York, N. Y.

Pertinent at This Time

RESIDENCE AND RACE: FINAL AND COMPREHENSIVE REPORT TO THE COMMISSION ON RACE AND HOUSING *by Davis McEntire. Published by University of California Press, Berkeley 4, Calif. (1960, 409 pp., maps, tables. $6)*

Although this book appeared in 1960 and discusses work done some years before that, President Kennedy's recent Executive Order prohibiting discrimination in housing built or financed with Federal aid makes it particularly pertinent and

Continued on page 188



Construction Details

for LCN overhead concealed door closer installation shown on opposite page

The LCN series 2000 closer's main points:

1 Efficient, full rack-and-pinion, two-speed control of the door

2 Mechanism entirely concealed in head frame and top of door; arm shows when door opens, is hidden when door is closed.

3 Hydraulic back-check cushions door if thrown open violently, saving door, wall, etc.

4 Hold-open available at 85, 90, 100 or 110 degrees setting

5 Though compact in design and size, closer is made for heavy duty and long life

Send for comprehensive folder
and see Sweet's 1963, sec. 19e/Lc, p. 6

LCN

LCN CLOSERS, PRINCETON, ILLINOIS
A Division of Schlage Lock Company
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For more information, turn to Reader Service card, circle No. 338



Modern Door Control by

LCN

Closers concealed in head frame

General Offices, United Insurance Company of America, Chicago, Illinois

Shaw, Metz & Associates, Architects

LCN CLOSERS, PRINCETON, ILLINOIS

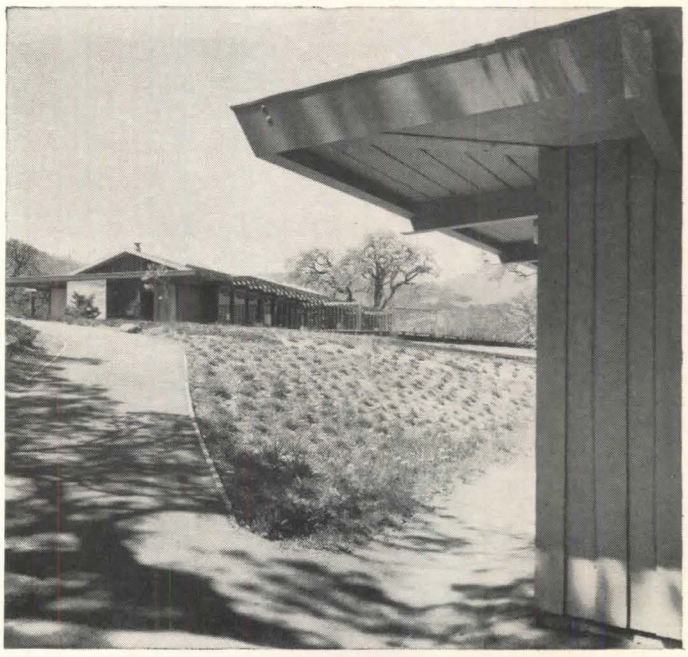
Construction Details on Opposite Page



Looking in on a classroom reveals the natural continuity of wood in supporting beams, paneled walls, and tongue-and-groove ceiling. It also illustrates how the Corte Madera School in Portola Valley, California, openly takes advantage of the sunlight. Architect: Callister & Rosse.



The pavilion-like Corte Madera kindergarten, although placed away from other classroom units, maintains its close school ties with wood.



The board-on-board siding of the Corte Madera kindergarten and the buildings atop the knoll show off some of wood's wonderful economy.



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By its very nature, a school of wood suits a city or suburb or country site beautifully. Its exterior of wood siding, roofing, and exposed framing is both attractively warm and enduringly strong. Its classroom interiors of wood floors, doors, ceilings, walls, and furniture are equally friendly and functional for learning and teaching alike. Its quiet throughout is encouraged by wood's acoustical qualities, its temperatures within benefit from wood's insulating advantages.

Wood's workability permits you to make the most of your materials to fit a community's purpose and budget. But just as important, wood's many unique characteristics allow desirable economies in maintenance, repairs . . . and flexibility for easy expansion to accommodate growing enrollments. For additional information on designing schools with wood, write:

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Wood Information Center, 1619 Massachusetts Ave., N.W., Washington 6, D.C.

nlma

find the better way with **wood**



Exposed framing and rustic columns of wood stand out to help blend in a teachers' wing with this bucolic setting. Note the wood baffle grills that partition the areas outside each of the Corte Madera classrooms; also, how comfortably wood frames all the glass.

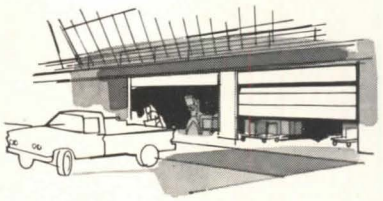
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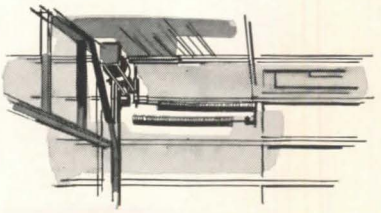
CONTROL FLOW OF TRAFFIC WITH THE DESIGN



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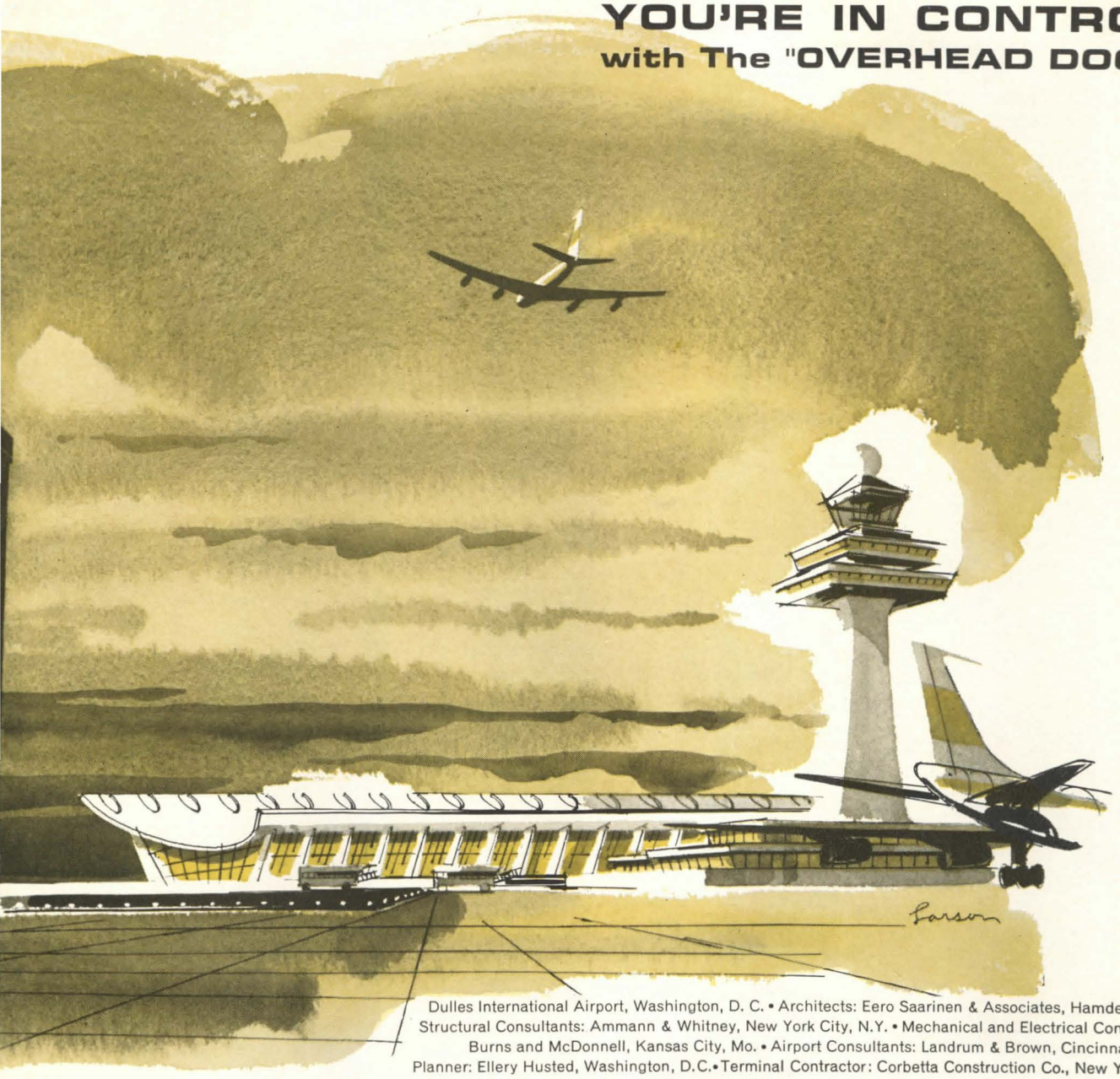


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At Dulles Airport, "Traffic" means much more than just people and planes. Traffic means a constant flow of air cargo *and* the ground vehicles to handle it. Traffic means a sizeable task force of fire and crash equipment *and* the maintenance crews to keep it "at the ready."

To solve these and many other problems in traffic flow, the architects called on the engineering experience and production facilities of Overhead Door Corp. Their confidence was well placed, judging by results. Already installed: 115 doors, 104 of them equipped with "AUTO-MATE" automatic operators, with more on order. Now, traffic flows smoothly, quickly, flexibly, with The "OVERHEAD DOOR." Installed side-by-side, and equipped with "AUTO-MATE" automatic operators, these doors become a movable wall. Opened as a group, they can give total access to an area. Opened individually, they can direct the flow of traffic, prevent pile-ups.

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Get details from your local distributor—he's listed under "OVERHEAD DOOR" *in the white pages; or write to General Office above.*

For more information, turn to Reader Service card, circle No. 355

HOW SPACE AGE ELECTRONICS SOLVES SPASMODIC HEATING

All gas-fired forced air furnaces are deliberately oversized to provide ample capacity for coldest winter days. Most of the time, heat is delivered in short bursts, followed by long off periods. Result: temperature stratification, cold corners, then hot blasts.

The logical solution is to run a furnace slowly—continuously—just enough to meet heat losses.

Selectra electronic modulation provides this new concept. Except on mild days, the fan and burner run continuously: but, Selectra changes the size of the flame to meet changing demands. Registers emit a gentle flow of warmth, eliminate temperature see-saws.

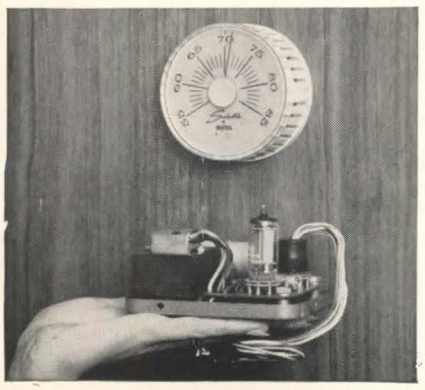
Key to performance is a tiny space age thermistor in the Selectrastat. It senses 1/10 degree temperature changes, advises an electronic amplifier which in turn causes a valve to regulate gas flow.

Many progressive gas-fired equipment producers now offer Selectra. Among them: Bard, Hastings, Hall Neal-Victor, Janitrol, Mueller Climatrol, Thermo Products Thermo-Pride, XXth Century. Now also a key to practical make-up air heating.

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For more information, circle No. 343

continued from page 182

valuable at this time. *Residence and Race* is an impressive analysis of data bearing on most aspects of minority residential patterns. It is also surprisingly readable and pleasantly moderate in tone.

The Commission on Race and Housing is a private group established in 1955 with financial assistance from the Ford Foundation's Fund for the Republic to study the housing problems of minority groups. Davis McEntire, the Commission's research director, uses this volume to summarize a series of studies prepared for the Commission, dealing with the causes, manifestations, and consequences of discrimination in housing.

Two chapters of this volume are of special interest. One is "The Housing Market in Racially Mixed Areas," in which the author reports on two studies that examine the emotionally charged beliefs that the exodus of whites and declining values are the inevitable result of non-white entry into a neighborhood. (Underlying these beliefs are the hypotheses that whites will not move into an area once it has been entered by non-whites, and that non-whites will not be able to fill all such areas; therefore, housing demand and price must necessarily fall in areas entered by non-whites.) McEntire reports that the Commission's studies show neither proposition to be necessarily true. In the recent past, Negroes have been able to fill up many areas; whites have left, but prices have, if anything, risen. Where Negroes have entered areas of expensive housing not near customary ghettoes and which they obviously could not fill up, there has been no panic sale and no loss of value. In other cases, whites have continued to buy into changing neighborhoods, although not always fast enough to keep the areas integrated over a long period. In these situations, prices will go down if Negro demand falters. White reaction seems to depend on whether a complete neighborhood take-over is expected. If this is not the case, and the area is otherwise desirable, it may remain stably integrated.

In a chapter on "Race Discrimination and the Law," the author discusses the usefulness of law in dealing with what many consider to be matters of morals and usage. McEntire feels that ". . . a law against race discrimination, while running counter to customary practice, is consistent with the moral principles held by most Americans." He is optimistic regarding the usefulness of law in bringing practice into line with professed morals.

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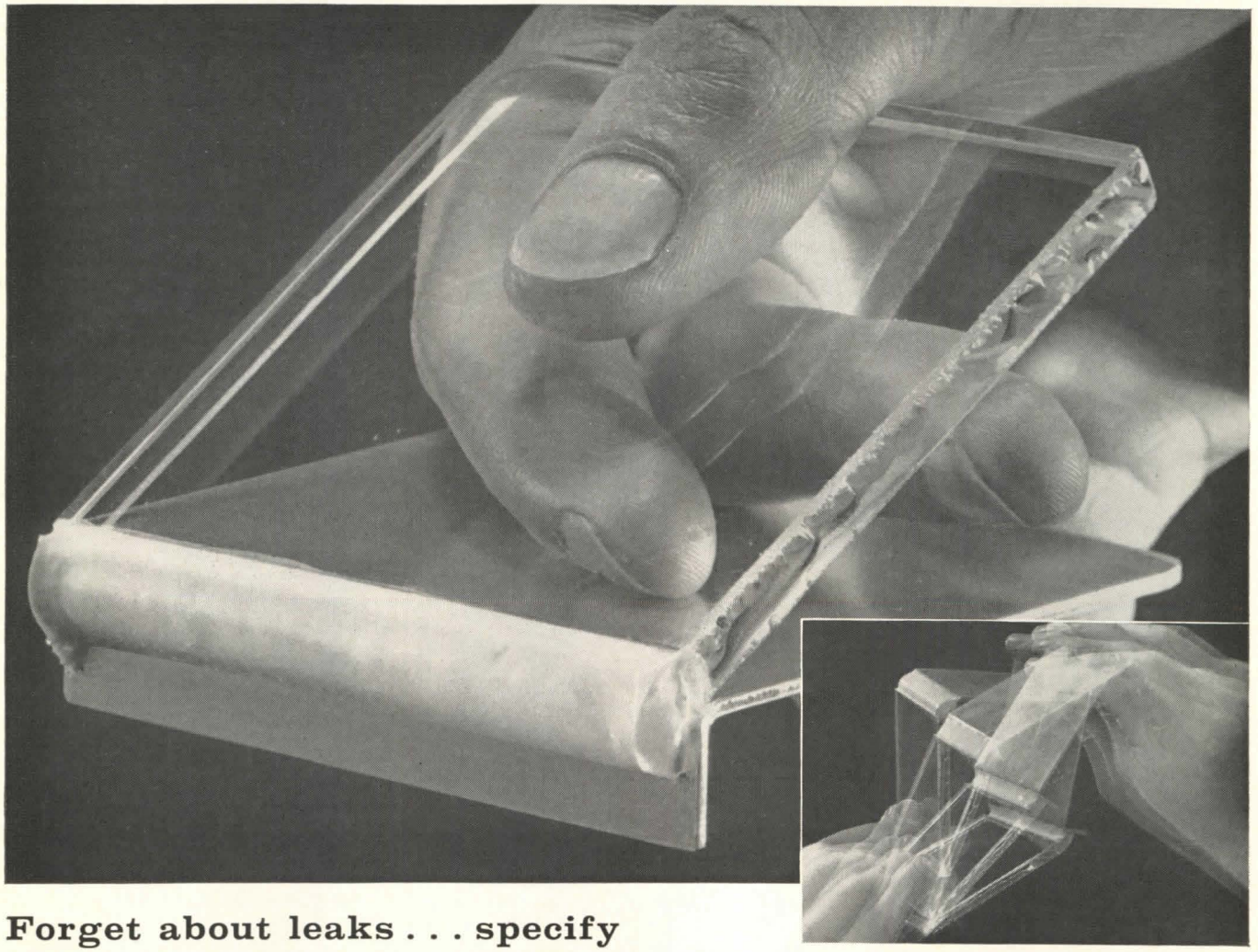
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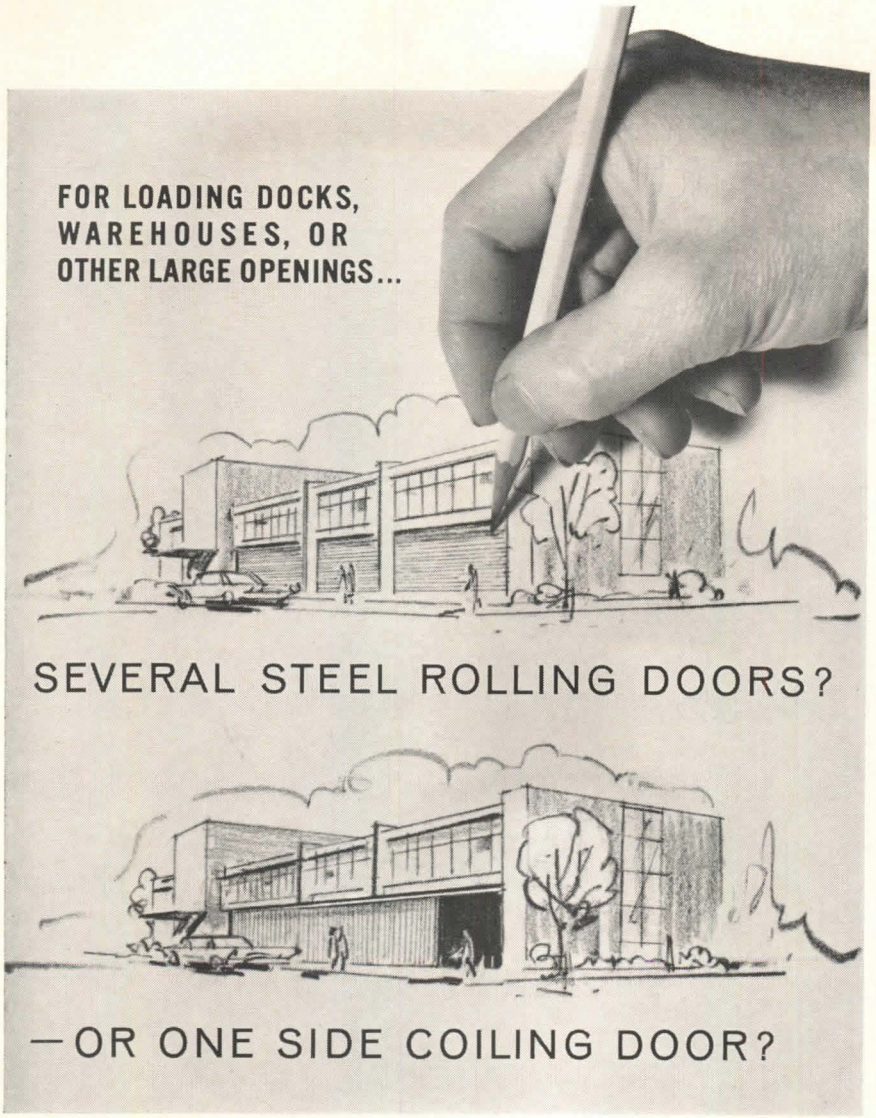
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The volume clearly illustrates that many factors beyond direct, individual prejudice in the choice of neighbors and neighborhoods operate to perpetuate segregation. The most important of these appear to be the policies of financial institutions, real estate boards, and in some cases municipalities, in the exercise of their discretionary powers (permits, services). The author suggests that considerable dispersal of segregated minorities could be achieved by action against discrimination at these levels, and he repeatedly states that dispersal itself is the best means of diminishing prejudice—i.e., Negroes in the mass are perceived as threatening and reinforce prejudice, while dispersed minority members, if noticed at all, are likely to be perceived as individuals.

The entire volume is divided into four major parts. The first, "Where Minorities Live," covers distribution of minority groups within the nation and within cities, showing that there has been some decongestion of Negro areas since the war, by virtue of expansion rather than dispersal. Part 2, "Minorities in the Housing Market," covers characteristics of minority housing: age, condition, quality, and quantity in relation to cost, and cost of shelter in relation to income. The data show considerable variation between cities, but despite these variations, Negroes everywhere live in far poorer quality housing than whites, and everywhere pay more for the same quantity and quality of housing.

Part 3, "The Housing Industry and Minority Groups," reviews the difficulties that the private builder wishing to build for Negroes is likely to encounter. Acceptable sites are very rare, financing difficult to get, and the market for new housing weak. In the past, interracial housing has been more difficult to build than all-Negro housing, but this has been changing. Once built, a variety of factors appears to influence the workability of integrated projects. If the area and development are desirable, whites will live there; if it is too far from other Negro areas, Negroes won't. The need for a quota to keep the area mixed will generally arise only if the project is not good enough to compete with others available to whites.

The fourth section deals with the role of the Government. The regrettable history of FHA encouragement of restrictive covenants, the separate but equal tradition in public housing, and the problems of an urban-renewal program that too frequently has torn down Negro housing and replaced it with deluxe apartments

for whites are covered here, as well as the encouraging rash of city and state nondiscrimination laws, now capped by the President's Executive Order.

In the present time of exaggerated fears and possibly exaggerated hopes, this well-written and well-documented book can help preserve a sense of proportion. McEntire's analysis of the factors contributing to residential discrimination and the working of nondiscrimination laws appears to indicate that the recent Executive Order, if enforced tactfully but diligently, can have a measurable effect, but that there may be need in the future for more far-reaching effort.

HANNA K. GROSSMAN
Bethesda, Maryland

OTHER BOOKS TO BE NOTED

The Architectural Index, 1962. Ervin J. Bell. The Architectural Index, 517 Bridgeway, Sausalito, Calif., 1963. 60 pp., $5 (paperbound)

Thirteenth annual index of articles from the major U.S. architectural magazines. Added feature of 1962 edition is a summary of headings to facilitate research.

Art in Latin American Architecture. Paul F. Damaz. Preface by Oscar Niemeyer. Reinhold Publishing Corp., 430 Park Ave., New York 22, N.Y., 1963. 232 pp., illus. $15

To be reviewed.

Century 21: The Story of the Seattle World's Fair, 1962. Murray Morgan. Photographs by Steven C. Wilson. Published by Acme Press, Inc., Seattle, Wash., 1963. Distributed by University of Washington Press, Seattle 5, Wash. 159 pp., illus. $12.50

To be reviewed.

Cha-no-yu: The Japanese Tea Ceremony. A. L. Sadler. Charles E. Tuttle Co., Rutland, Vt., 1963. 265 pp., illus. $7.50

Reprint of an out-of-print work that dates from 1933 and shows the influence of the tea ceremony on architecture, landscape design, flower arrangement, pottery, painting, and other arts.

Engineering College Instruction in Professionalism. National Society of Professional Engineers. 2029 K St., N.W., Washington 6, D.C., 1963. 33 pp. no charge (paperbound)

Details, results, and conclusions of survey on the instruction of professionalism in engineering colleges today. Emphasis is on integrating professionalism with regular classwork and the continuation of formal training by industry. A definition of professional engineering, a summary of the qualifications of present professors and instructors, and an analysis of specific programs are found in the appendices.

The English Tradition in Architecture: From Roman Britain to Coventry Cathedral. John Gloag. Barnes & Noble, Inc., 105 Fifth Ave., New York 3, N. Y., 1963. 258 pp., illus. $8.50

To be reviewed.

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School of Architecture and Planning: A Hundred Year Chronicle, 1861-1961. Caroline Shillaber. MIT, 1963. Distributed by C. Shillaber, Room 7-238, MIT, Cambridge 39, Mass. 134 pp., illus. $2 (paperbound)

A readable and well-illustrated history of the oldest school of architecture in the United States, from the story of its founding to a review of the people and ideas prominent in its 100-year development. Photos of student work range from a Richardsonian railroad station, 1886, to the bachelor's thesis of I. M. Pei (Standardized Propaganda Units for War Time and Peace Time China, 1940).

Pen and Ink, Inc. Edwin Bateman Morris, 5517 Grosvenor Lane, Bethesda 14, Md., 1963. 193 pp., illus. $3 (spiralbound)
To be reviewed.

Structure in Architecture. Mario Salvadori, in collaboration with Robert Heller. Prentice-Hall, Inc., Englewood Cliffs, N.J., 1963. 370 pp., illus. $13
To be reviewed.

The Urbanization of America, 1860–1915. Blake McKelvey. Rutgers University Press, 30 College Ave., New Brunswick, N.J., 1963. 370 pp., illus. $10
To be reviewed.

NOTICES

New Branch Offices

THE ENGINEERS COLLABORATIVE, Consulting Structural Engineers, Rockford, Ill. NORMAN MEYER is Associate in Charge.

JOHN GRAHAM AND COMPANY, Architects and Engineers, San Francisco, Calif. William Richard Armor, formerly of JOHN CARL WARNECKE AND ASSOCIATES, is in charge.

KUMP ASSOCIATES, Architects, New York, N.Y. DALE F. SPRANKLE is associate in charge.

MARTIN STERN, JR., AIA, ARCHITECT AND ASSOCIATES, 9348 Santa Monica Blvd., Beverly Hills, Calif.

New Firms

JOSEPH F. COOLEY, Architect, 1011 Tremont, Galveston, Tex.

FRED H. FIELD, Architect, 3030 Bridgeway, Sausalito, Calif.

GREGORY GUNN, Architect, 508 Wainwright Bldg., Seventh and Chestnut Sts., St. Louis, Mo.

MORTON L. LEVY, JR., Architect, 3400 Montrose Bldg., Houston, Tex.

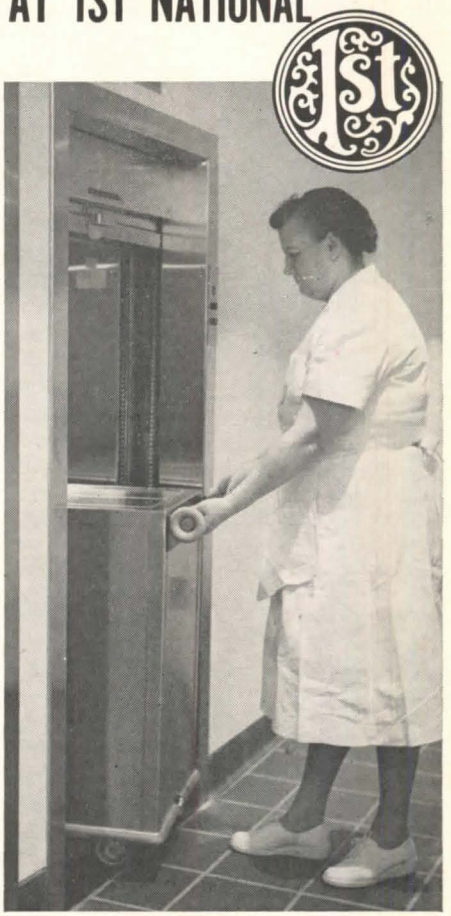
LAWRENCE E. MATSON, Architect, 578 Third St., Idaho Falls, Ida.

RICHARD MEIER, Architect, 1141 Park Avenue, New York, N.Y.

JOHN P. MORGAN AND ASSOCIATES, 187 S. Woodward Ave., Birmingham, Mich.

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Elections, Appointments

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HAROLD BURG made Vice-President and General Manager, MILTON SWIMMER made Vice-President and Production Manager, RAY DONNER made Vice-President and Director of Research and LILA KUNZE made Designer in firm of S.U.A., Interior Planning, Los Angeles, Calif.

CHARLES H. CROMBE appointed head of Boston branch of GRISWOLD, HECKEL & KEISER, ASSOCIATES, Boston, Mass.

Miscellaneous

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JACK C. LIPMAN has returned from the London office of DANIEL, MANN, JOHNSON & MENDENHALL to take a permanent position in their Los Angeles office.

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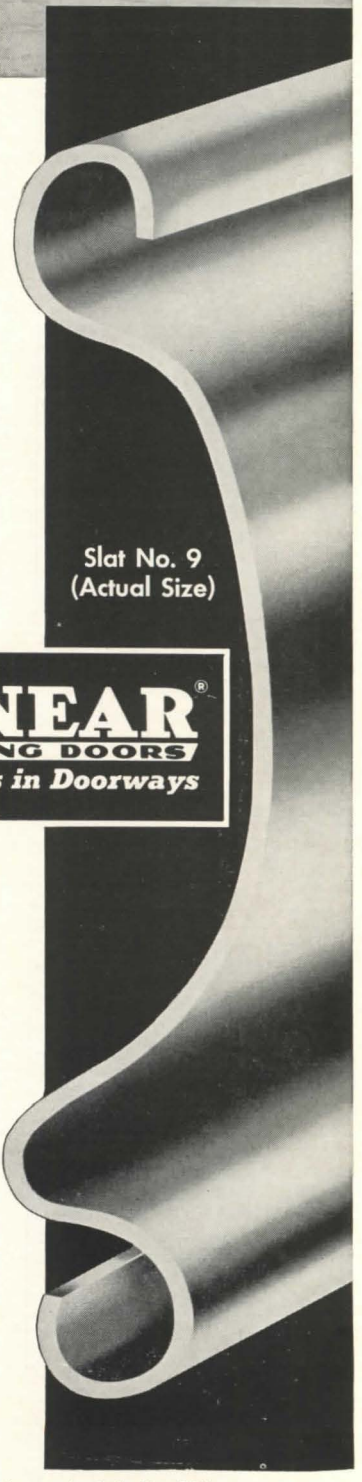
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(6, 7, 8) Dr. Franz Stoedtner

PAGE 104 & 105
(9) Dr. Franz Stoedtner
(10, 11) Engravings by A. Canaletto; photos Dr. Franz Stoedtner
(12) Dr. Franz Stoedtner
(13, 15) Engravings by Luca Carlevarii; photos Dr. Franz Stoedtner
(14) 18-Century painting; Dr. Franz Stoedtner

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(Top) 16th-Century woodcut, photo Dr. Franz Stoedtner
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ARCHITECT—29, M.Arch., major in design. 6 years with architectural and planning offices in India and the U.S. including one year teaching and two years of own architectural practice in India. Immigrant. Desires responsible position as an architect/planner or with a school of architecture. Box #613, PROGRESSIVE ARCHITECTURE.

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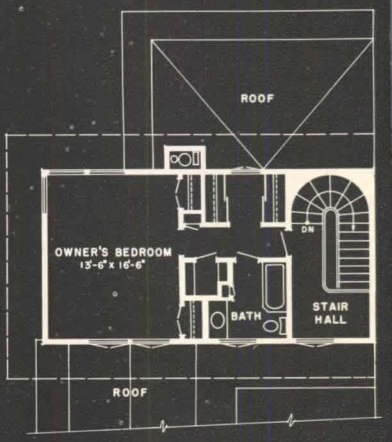
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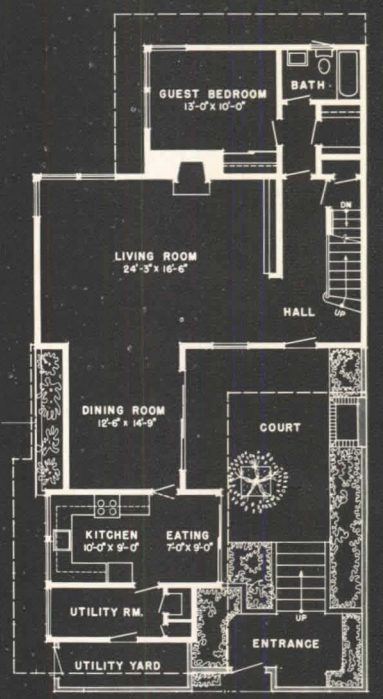
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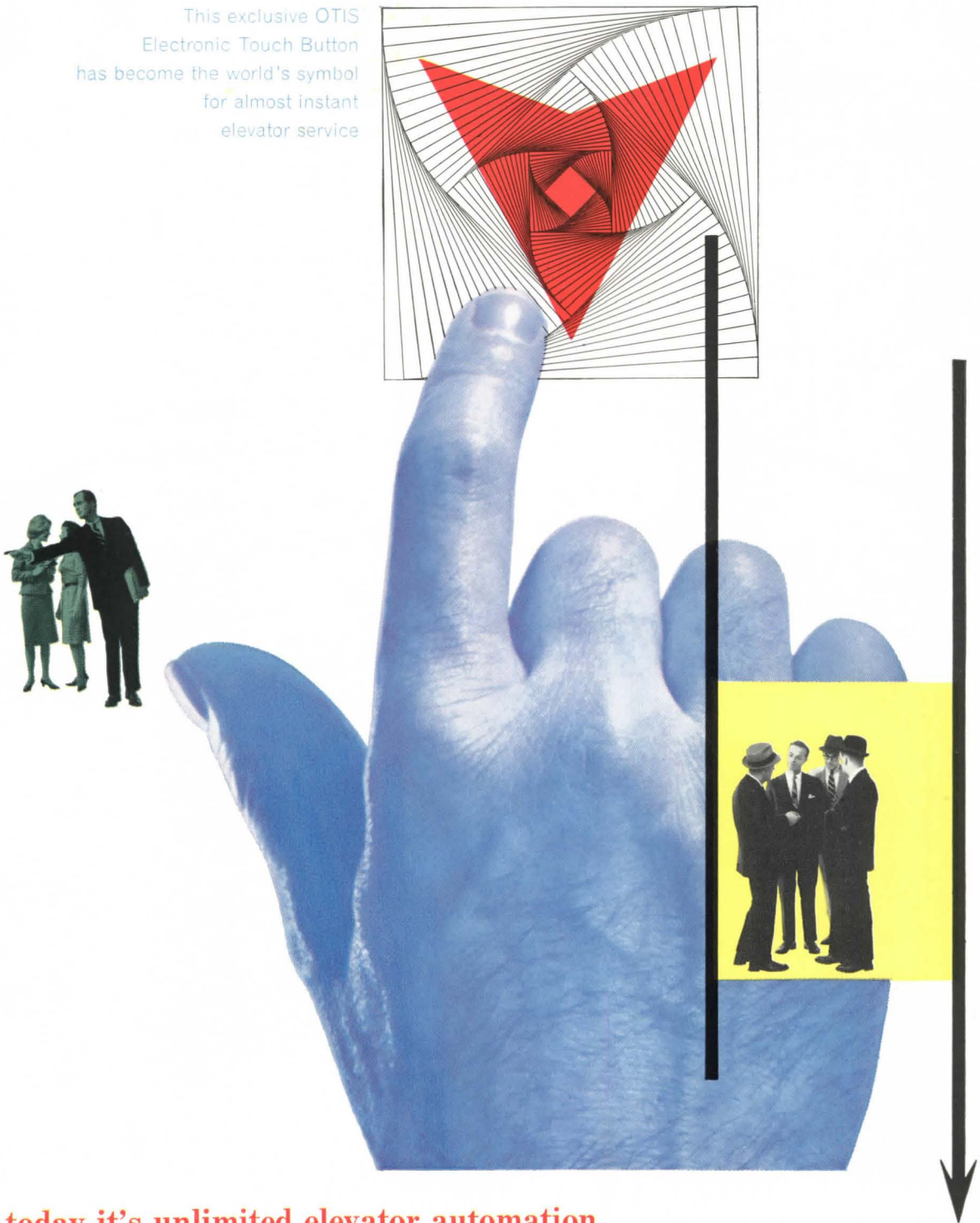
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